A MANUAL OF GOTHIC MOULDINGS.

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OF

GOTHIC MOULDINGS:

A PRACTICAL TREATISE

ON THEIR

FORMATIONS, GRADUAL DEVELOPMENT, COMBINATIONS, AND VARIETIES;

WITH FULL DIRECTIONS FOR COPYING THEM, AND FOR DETERMINING THEIR DATES.

ILLUSTRATED BY NEARLY FIVE HUNDRED EXAMPLES.

By F. A. PALEY, M.A.

HONORARY SECRETARY TO THE CAMBRIDGE CAMDEN SOCIETY.

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TO

J. H. PORTEUS OAKES, Esq.,

OF NOWTON COURT, BURY S. EDMUNDS,

THIS SMALL TOKEN OF ESTEEM,

FOR THE ZEAL AND LIBERALITY WHICH HE HAS EVER EXHIBITED

IN THE CAUSE OF CATHOLIC ART,

IS INSCRIBED

BY HIS FRIEND, THE AUTHOR.

PREFACE.

This volume is the substance of two papers read before the Cambridge Camden Society in the year 1844, and illustrated at the time by the full-sized sections of ancient Gothic Mouldings, of which the greater part is now presented to the reader on a reduced scale, with the addition of some others subsequently procured.

Perhaps more than ordinary indulgence may fairly be claimed for the many faults and imperfections which those who are conversant with the science of Mouldings will doubtless detect in the course of the work. Written in great measure at the solicitation of Members of the above Society, amidst various engagements which caused frequent interruptions and long delays; written, too, upon a subject hitherto, it may almost be said, uninvestigated, and requiring for its illustration by far the most difficult kind of sketches on which the architectural pencil can be employed; the merit of completeness and perfect accuracy it cannot reasonably claim, while any pretension to deep research or scientific discovery it would seem presumptuous in the author to entertain.

Uninviting as the study may at first sight appear, upon a casual survey of the present series of illustrations, it is believed that its acknowledged importance as a primary department of

Ecclesiology will soon render it a popular one, when sufficient information shall have been afforded, in a practical and intelligible form, to induce the uninitiated student to enter upon it. Of the great interest which it in reality possesses, all will readily be convinced who have once made the trial. And till better works appear, the "Manual of Gothic Mouldings" is offered as an elementary treatise, a grammar of that language which is inscribed on every detail, and which speaks in mysterious though expressive characters upon every page of the imperishable Records of the Medieval Church.

S. John's College, Cambridge.
The Feast of the Annunciation.

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A MANUAL OF GOTHIC MOULDINGS.

SECTION I.

INTRODUCTORY.

No person can have devoted much time and pains to the investigation of Christian Architecture, as it was practised in this country during the Middle Ages, without feeling the importance, and at the same time the difficulty, of acquiring an accurate knowledge of Mouldings. That certain conventional forms or details were in use at certain periods, and were uniformly adopted in the constructive decoration of all edifices, ecclesiastical and secular, throughout the length and breadth of the land, with varieties rather of combination or disposition, than of the component members, is an undoubted fact, well known to and admitted by all who have paid any attention to the subject. But whence these forms arose, whether from a natural process of gradual development, or from some esoteric principle of symbolical design; whether they originated in some real or pretended secret of freemasonry, or, lastly, in mere accident or caprice, are curious questions, which, so far as the author is aware, have never yet been made the subjects of much investigation. Again, how far the same forms were arbitrary or obligatory in ancient freemasonwork, how far they emanated from some particular source, and were dispensed by authority through the country, or were assumed by some tacit agreement on the part of the masons themselves, are equally interesting speculations, though, perhaps, equally difficult to determine. However this may have been, it is quite certain that a strict intercourse must have been kept up

between the members of this body of artisans, or almost every ancient church would exhibit new and strange varieties in the details of its Mouldings. When we consider the difficulty which then existed of constant and speedy communication between distant parts of the country, this general resemblance and uniformity, not only indeed in Mouldings, but in all the parts and features of Church architecture, must appear still more surprising. There is in all these enough of licence and variety to make the knowledge of them a comprehensive and difficult study to us, and yet such evident resemblance and decided adherence to rule, as to convince us that some *system* must have been observed both in designing and executing them.

Or shall we refer this acknowledged uniformity to no more recondite cause than *fashion?* Shall we say, that as the same kind of hat, or coat, or other article of dress, is seen in London which we find commonly used at York, with varieties indeed, and a considerable degree of caprice in adorning or diversifying them; and that, as all these things are exclusively in the hands of certain bodies, as hatters and tailors, and no one ever dreams of employing others than these in providing them; so there was at once a fashion and a monopoly in architecture, and a solecism in Mouldings would have seemed to the ancient churchmen as striking and offensive a fault as we consider a solecism in dress? Perhaps this is the most rational and probable view: but then it is one so startlingly unlike our own architectural practice, in which every professor is wont to design just as he pleases, and even when he pretends to imitate, most widely departs, that it certainly does appear strange and unaccountable to us.

However, all these questions are quite foreign to the object of the present work. They are all the province of the Antiquary rather than the Ecclesiologist, and as such we do not propose to say anything more about them, especially as we are quite incompetent to give any learned solution of the difficulty which they involve. But this we may reasonably observe, that it is

truly surprising that little or nothing has yet been achieved in promoting this most interesting and most practically important department of sacred architecture. Probably the supposed uncertainty and obscurity of the study, our want of sufficient data founded on philosophical principles, our ignorance of the exact periods at which buildings were erected, and the apparent anomalies and inconsistencies which seem often to occur, have all tended to deter even the most competent from writing a complete treatise on the subject. To these may be added the tediousness of making any considerable collection of drawings and sections of Mouldings, the almost insurmountable difficulty of copying them with minute accuracy, and the very great observation and research which are absolutely necessary for attaining any tolerable knowledge of their history and true theory. These are causes at once sufficient to render a first attempt imperfect, and to induce the reader to pardon any errors or deficiencies which he may notice in the course of the present work.

We say *a first attempt*, because we repeat that, with the exception of a few perspective wood-cuts, and still fewer outlines of sections and elevations, dispersed through various periodicals and popular works on Gothic architecture, nothing has as yet been done towards elucidating the subject, or at least, that no systematic treatise on Mouldings has appeared, containing rules for determining styles and dates, or classifying the different orders, though the frequent demand for such a work shows clearly how great would be its value and utility. Of the numerous and costly publications on Gothic architecture which have issued from the press since the time of the admirable John Carter—of all the treatises which have been written, and all the essays which have been read, not one has come to our knowledge, in which more than a very partial and casual mention is made of Mouldings. To Professor Willis, whose most valuable and acute investigations into the science of Christian architecture

are already known to the public, and whose interesting works on the Architecture and the Nomenclature of the Middle Ages contain some important remarks on the present subject, we may be permitted to say that the hopes of those are directed, who cordially desire a full and philosophical exposition of the science of Gothic Mouldings; and it is not, perhaps, too much to express our belief, that this hope will soon be realised.

In the mean time, an humble attempt to supply in some measure an acknowledged want may meet with more or less favour according to its deserts. It may possibly be said, Why should such profitless pains be taken in investigating these dull and insignificant minutiæ: why should we not be content to copy them in our new churches without writing books about them, and so turning an amusing pursuit into a hard lesson, by imposing on beginners so much to learn? We answer, that Mouldings are of the greatest possible importance; so much so, that they have rightly been called "the very grammar of the art." They are by far the most certain, and very frequently the only, guides in determining the dates of buildings; they are just as essential to a knowledge of architecture, as a tool is to the hand of a workman. In practice, too, they are of the first importance. No one has any claim to the name of architect, who thinks the science of Mouldings beneath his notice.

It must be confessed, though the assertion be an invidious one, that but little acquaintance with Mouldings is evinced in the works of most modern architects. Surprising as it may appear, it is a fact that, till very lately at least, scarcely one capital or base in twenty has been correctly worked; and even in the present revival, it is but too common to find the most wretched and meagre imitations of ancient examples, the spirit and character of which are completely lost or perverted by some culpable violation of leading principles. This certainly ought not to be. It is impossible that professional men should *now* acquire respect and celebrity, when they neglect such essential elements of their

art. How is it that buildings of the greatest cost and pretension sometimes exhibit serious anachronisms and confusion of styles in the use of their Mouldings? The reason is, that the science is a deep and a difficult one, which cannot be attained without particular and extensive study. Each artist has only his own exertions and observations to depend upon in acquiring any knowledge of it, and it is evident that adverse circumstances may occur to prevent this in a great many cases.

In making these preliminary remarks, we would by no means discourage the amateur from essaying the task because it is difficult, and are very far indeed from implying our own competency to be his guides and instructors in doing so. A work on Mouldings may have any one of the three following ends in view. It may either contain a great collection of the best examples, accurately reduced to a scale, or accompanied by measurements, so as to form a magazine of reference, and thus supply the wants of practical men, who are often driven to invent, from not having at hand, and being unable to procure in their immediate neighbourhood, any available models; or, secondly, it may profess to be a complete and elaborate exposition of the *theory* of mouldings, dealing with principles rather than with bare facts, and taking a comprehensive view of the whole subject through the medium of the Classic and Romanesque varieties; or, lastly, it may be an elementary treatise, intended only to convey plain and easy information on the most ordinary forms, and on the differences observable in each style. The first could perhaps be satisfactorily accomplished only by a professional man, who might be supposed to know the wants of architects and the best method of supplying them. The second would require not only very considerable acuteness and ingenuity, but the observation and collections of many years. The last is perhaps capable of being tolerably well treated by an amateur, who has himself seen the want of some work on the subject, and been thrown entirely upon his own resources in examining and investigating it.

Such then will be the aim and object of the present work, the pretensions of which are humble, and the method of treatment simple and practical as far as possible. It is obvious that the number of examples given might be absolutely unlimited, and that to attempt a complete illustration would require hundreds of engravings, and a judicious selection out of thousands of drawings. Such extensive resources the author does not profess to possess; nor can he even assert that every one of the examples he has given, from a collection of a few hundreds of full-sized sections, and about as many drawings, made at different times and places by the eye alone, is of that perfect and minute accuracy which might have been attained by a laborious reduction of full-sized outlines to one and the same scale. The object being to explain details and formations, and to point out differences, rather than to furnish models for modern imitation, this extreme faithfulness of delineation, though of course highly desirable, is unnecessary, and was in the present case quite impracticable. For the same reasons the measurements are only occasionally added. The specimens engraved are mostly those of ordinary occurrence, rather than examples of rare exceptions to the general practice of the ancient architects.

Viewed as an inductive science, the study of Gothic Mouldings is as curious and interesting in itself as it is important in its results. Any one who engages actively in it will be amply repaid, if only by the enlarged views he will acquire of the ancient principles of effect, arrangement, and composition. But the curves, the shadows, and the blending forms, are really in themselves extremely beautiful, and will soon become the favourites of a familiar eye; though viewed without understanding they may seem only an unmeaning cluster of holes, nooks, and shapeless excrescences. Perhaps few are aware that every group can be analysed with perfect ease and certainty; that every member is cut by rule, and arranged by certain laws of combination. But such is surely the case; and a know-

ledge of the fact should convince the student of the reasonableness of the study. Let him only enter upon it, and he will be rewarded for his pains. The only necessary conditions are, a tolerable idea of delineation, and a general interest in ecclesiology. Possessed of these simple qualifications, he will be led on by his subject from step to step, almost imperceptibly, ever observing and adding to his store of facts and examples, and tracing out to his own satisfaction the forms and processes through which he conceives Mouldings to have passed in the various stages of their development. He will learn to pronounce with confidence the date of the merest fragment of sculptured stone. He will ever and anon meet with some new and singular conformation, perhaps overturning his previously formed theories, —perhaps clearly reducible to and confirmatory of them. He will look at every ancient building, however dilapidated or defaced, with a more searching eye,—for he will be sure to find in its very demolition peculiar facilities for research. He will regard every shattered arch with a new attention. He will find the same satisfaction in examining it (a melancholy satisfaction perhaps, yet a like feeling of keen interest) which a botanist finds in a rare plant, a herald in an ancient escutcheon, or a mineralogist in a fine specimen.

The learner must be duly apprised that the best work on Gothic Mouldings which could possibly be written will do no more than set him in the right way to obtain a knowledge of the subject by his own research. A few examples in the page of a book are as nothing, if he does not apply in practice that which he has learned from them. The look of a moulding is so very different in section, projected in a reduced size on paper, from its appearance in perspective reality, that the same form seen in the one may not even be recognised in the other. We will here, therefore, once for all, explain how our engravings are to be understood.

Supposing a moulded archway were to be taken down, and

any one of the voussoirs or arch-stones placed upon a large square sheet of paper, in such a manner that the *wall-line*, or part of the stone which lies in the plane of the outer wall, should be parallel with the end of the paper nearest to you, and the soffit, or inner surface at right angles with it, parallel to one side; and then a pencil were to be carried along the wall-line first, and afterwards in and out of each cavity and round each projection; the outline thus obtained, reduced to a small size, say a scale of an inch to a foot, and shaded on the part which represents the level surface of the flat side of the stone, would form a diagram exactly similar to our illustrations. Again, if a string-course were to be sawn across, or a capital or base down the middle, and a piece of paper inserted in the crevice, and marked off by the sharp edge of the moulding, this would in the same way represent our own little shaded sections of these details. The usual *popular* way of engraving Gothic Mouldings is to give a perspective sketch of a stone or slice cut out of the arch, showing at once the flat end or upper face, and the moulded side, and shading the cavities and projections. But this, though its general appearance is certainly much more like the reality, does not give fully the individual forms of the members. The method adopted by architects is uniformly that which has been followed in the plates illustrating the present work. Each example is, in fact, the same as the *templet* or *mold*, a thin plate of zinc, tin, or wood, which is used by workmen in marking out the stones previously to cutting them out.

But the student must not only *observe;* he must *copy* Mouldings in order to understand them. Without the latter, his knowledge can never be otherwise than vague, partial, and imperfect. How to do this, we shall shortly endeavour to show, by explaining the various methods which have been practised with more or less success. It must be understood at the outset, that though certain lines, planes, and measurements, may be drawn in all cases to assist the process, and ensure general fidelity, there is nothing

so difficult to copy *minutely* by the eye, because the exact curves, which are not always geometric, can scarcely be caught without very great and laborious practice. And if the true form is not attained by the first stroke, the endeavours to improve it will seldom be very successful. Perhaps the student's first attempts will be altogether futile; but it is surprising how well and how readily a *practised* hand can copy in a few minutes a most complex group. A small note-book, with metallic pencil, should be kept exclusively for copying Mouldings by the eye, the measurements and name of place being duly registered with each example.

For the mediæval nomenclature of Mouldings, the admirable and useful work lately published by Professor Willis, and already alluded to,* supplies an authentic source of information. From this treatise, some of the ancient names of Mouldings may be learnt; and it is to be hoped they will be revived, especially in the present dearth of terms.

A few expressions used in this work it will be necessary clearly to define before entering upon the subject.

Any architectural member is said to be *moulded*, when the edge or surface of it presents continuous lines of alternate projections and recesses.

The directions of these lines are three in Gothic architecture; horizontal, vertical, and curvilinear.

A drawing which represents these lines as they appear to the eye placed exactly opposite to them, is called the *elevation* of a moulding.

A drawing which represents the outline of these projections and recesses, is called the *section* or *profile* of a moulding, being the appearance it would present if cut through *in a line at right angles to its bearing*. Thus, Fig. 10, Plate 1, if cut across the line A B, would present the appearance of Fig. 5.

* The Architectural Nomenclature of the Middle Ages, being Part IX. of the Transactions of the Cambridge Antiquarian Society. Reviewed in the *Ecclesiologist*, vol. iii. p. 141.

A *mold*, or moulding (the former is the ancient term), properly signifies the entire series which ornaments a jamb or arch; but it is here used in the common sense of a particular part or member of such series.

Members are said to be *grouped*, when placed in combination, as we generally find them; but

A *group* is a bunch of mouldings or separate members, standing prominent or isolated, either on a shaft, or between two deep hollows.

An arch of two or more *orders*, is one which is recessed by so many successive planes or retiring arches, each placed behind and beneath the next before it, reckoning from the outer wall-line. Thus, Fig. 5, Plate 1, is the section across an arch of "two orders," and Fig. 7 is of "three hollow-chamfered orders."

As it is necessary for every student in this science first to understand the general principles of formation, and, secondly, to be able to draw or "take" mouldings, either full-sized or reduced to a scale, with tolerable precision, we will explain these preliminary points as simply and briefly as possible, before we enter on the consideration of the combinations and more minute varieties of detail.

SECTION II.

THE GENERAL PRINCIPLES OF FORMATION.

We hold that these are the peculiar and genuine offspring of Christian architecture, or at least are very partially and indirectly borrowed from the Classic styles; although, as we might expect, some coincidences of form exist between them. There are some who contend that all Gothic mouldings are derived, me-

diately indeed, yet very decidedly, from Roman; a supposition hardly probable in itself, when we observe that in the Romanesque style (in England at least), which was most closely connected with the Classic, the forms of the mouldings which we call Gothic are merely nascent, and entirely undeveloped; and one which appears scarcely tenable, from the consideration that the mediæval architects of this country must have known little enough of Roman temples, or even of Italian architecture, and if they had, we cannot suppose they would have cared to copy in its details what they altogether repudiated in its kind. But the convincing argument is this: that in Gothic moulding all the links in the process of formation are connected and complete, from the first and rudest origin to the most elaborate development; and the steps are so natural, the transitions so easy, that any two styles working independently of each other from the same beginnings and elemental forms, could hardly fail of arriving at least at some of the same results. Again, if at this or that period a new member was introduced, and, as it were, a new letter added to the alphabet, why should we not attribute it to invention, rather than seek for it in the resemblance which an Italian moulding may happen to bear to it? However, the discussion of this question is rather for those who have to do with the theory of mouldings, as the determination of it does not in the least affect the facts with which we alone profess to deal. And it must be confessed that those only are competent to decide it who have minutely examined for themselves the details of the Romanesque churches on the Continent.

It is, however, certain that *some* connexion exists between Gothic and Classic mouldings. The early English base is allowed by all to have been borrowed from the Attic, and we shall hereafter clearly demonstrate that such was the case. And it may be that some forms, such, for instance, as the scroll-moulding and the roll-and-fillet, came from some external source. But if every form can be shown to be an improvement or modification of a

preceding one, we may fairly conclude that the whole series is the offspring of one and the same progressive art.

In their use also Gothic mouldings differ as widely as possible from Classic. The former are repeated to almost any extent, so as entirely to occupy the large recessed spaces in jambs and arches. They are repeated too in groups, each group being composed of the same members, or nearly so, especially in the earlier styles. The latter are few in number, and very limited in their application. The combinations of the one are in a great measure arbitrary, though the forms themselves are fixed; in the latter both are absolutely defined. The former run principally in vertical lines, the latter in horizontal. In Gothic architecture, horizontal mouldings occur in water-tables and string-courses, and in capitals and bases, in which positions they invariably form subordinate lines, so as to contrast and display the predominant principle of a vertical ascending sweep, and may so far perhaps be regarded as lingering vestiges of the Classic usage —evidences of the victory of Christian over Pagan art. For it is needless to remind the reader that Gothic owes its origin, though not its development, to Basilican, that is, to Roman architecture.

An intelligent and thoughtful writer in the *English Review** has the following remarks on the differences between Grecian and Gothic mouldings: "Where the Grecian delighted in broad level surfaces, catching the light in masses, or in projecting curves on which it dies away by degrees into shadow, the Gothic roughened and encrusted them with carving. And thus in general we measure, or, if the expression may be used, we read and peruse a Grecian moulding by its lights, and the Gothic by its shadows." Again: "Of the differences between the two classes of moulding, some may be detected by a superficial view. For instance, the Grecian delights in convex lines, the Gothic in concave; the Grecian in broad lights, the Gothic in narrow.

* For December, 1844.

The Grecian throws out projections to catch the eye; the Gothic endeavours to bury it in deep recesses. The Grecian leads it gently along in sweeping, unbroken undulations; the Gothic fractures its lines, and combines them in angles and curves. The lights and shadows of the Grecian melt and slide insensibly into each other; those of the Gothic are planted together in strong and bold contrast. . . . . In the purest Grecian buildings, vertical mouldings are rare. Horizontal mouldings form the leading lines; and it is by these, even in later and degenerated specimens, that the vertical mouldings are regulated. In the Gothic, vertical mouldings are most frequent; and they overrule and determine those which are horizontal. And Grecian mouldings are simple and easily divisible into parts; Gothic are entangled in labyrinths, and perplexed with innumerable intricacies."

The notion of ascending mouldings is coeval with the introduction of the arch, and may indeed be traced to a still earlier period in the sides of doorways and similar positions. When the Romans broke up, by means of the arch, the continuous horizontal entablature of the Grecians, the cornice mouldings were carried round it, and fell on each side in vertical lines into the horizontal, thereby producing the same result as in Gothic, though with a very different effect; in the one case, horizontal lines continuing to predominate, in the other, being subdued and rendered secondary and subordinate to the vertical principle.

Gothic architecture revelled in the use of mouldings. We are not speaking of what are usually called *ornamental* mouldings, such as the dog-tooth, the ball-flower, &c., so much as of the plain continuous lines of light and shadow; though they are in effect identical, since the former are nothing but serrated ridges,* more or less rounded and modified from the first process. Every

* This may occasionally be seen, when the moulding was left from some reason or accident partially uncut. It is probable that they were generally worked out after the completion of a building.

door, window, monial,* every edge, vertical or horizontal, every band, string, groin-rib, roof, label, arch, and jamb, whether of wood or stone, internal or external, was moulded. Of course the effect produced by so free and extended a use of them was magnificent in the extreme. Construction gained thereby a rich perspective, diversified, pictorial embellishment; a depth of shade, an attempering of bare prominent outlines, a fine tone which arrested the eye, and made it dwell on certain parts of higher pretension and more exquisite elaboration than others. And yet mouldings are merely the ornamental adjuncts, not the essentials, of architecture. Some buildings of the best periods were quite devoid of mouldings; whence it is evident that they are not necessary even to a perfect design. Boldness and simplicity produce effects, different indeed in their kind, yet not less solemn and striking than richness of detail. But the power of mouldings was appreciated to the full by the ancient architects, and it is quite evident that they delighted in their extensive use. It was their ambition to work them wherever they could possibly find means and opportunity. Hence it is that such a vast quantity everywhere remains, that no ordinary pains are requisite in examining any considerable moiety of them for the purposes of investigating their principles. If the uniformity in their use had not been very strict and close, it had indeed been a hopeless task ever to master the subject; indeed, if there had not been a *system* of moulding, there would have been nothing to investigate. But so little did the mediæval masons depart from the fixed conventional forms, that we often find a capital, a base, or an arch-mould of perfectly the same profile in an abbey or a cathedral, which we had copied in our note-book from a village church at the other end of the kingdom; so that we might almost suspect that the very same working-drawing had been used for both. And this, when we consider it, must appear a very wonderful fact.

* The mediæval term for what we now call *mullion*

Our readers will now be fairly tired of this tedious preliminary chapter, and will be anxious to enter upon the subject at once. And at this point we are in a condition to comply as well as we can with their wishes.

We will begin with very early buildings, and see if we can discover the origin of the practice, and then gradually trace each step until we have analysed and classified all the forms according to their respective dates.

If we take the plan of a Saxon window or door-way, we shall perhaps find it nothing more than a rude square-edged aperture in a plain wall, as in fig. 1, plate 1. This may often be met with, even considerably later, in small and rude country churches, especially in belfry-arches. It may, however, be relieved and expanded by splaying it on one or both sides, that is, by sloping or chamfering off the edges, as in fig. 2. So in an ordinary early English lancet window, the long narrow opening has a very wide splay inside and a very small one on the outside, fig. 3. But in arching over the upper part of such an aperture, as fig. 1, made in a thick wall of loose rubble masonry, it was not uncommon to add, for the sake at once of ornament and security, a sub-arch, or under-rib, like the groin-rib of a vault, constructed of fine-jointed ashlar, as fig. 4. This sub-arch rested either on a pillar at each side, or a projecting impost, or it was carried continuously down to the ground, that is, without any interruption or change of shape. Now in this rude arrangement, which is observable in many continental Romanesque churches, and may probably be connected in its origin with the overlapping stone-courses in classic architraves, we shall find the germs of an usage which ever afterwards prevailed, with some improvements of form and detail, but no alteration of principle.

If we chamfer off each *arris*, or sharp edge, of this aperture, which now becomes *recessed*, or of two *orders*, or retiring members, we at once obtain the plan which was most constantly used, especially in pier-arches, without the least change of form,

for centuries afterwards (fig. 5). Of course there may be two or more sub-arches, if the wall be very thick: the one retiring behind the other. And the chamfer may be hollow, or fluted, as in fig. 7, which is common in early English and Decorated arches. This is the case in the chancel-arch at Cherry Hinton, near Cambridge, and was much in vogue from about 1260 to 1320.

It is quite evident that this is the formation of the commonly occurring arch of two plain chamfered orders. Were any proof wanting, we might refer to cases where only one side is chamfered and the other left square, as at Horningsea, near Cambridge, circa A.D. 1190 (fig. 9), or to the peculiar termination represented in elevation in fig. 10, which is common in early English arches, as at Waterbeach, near Cambridge, or to the springing of a three-quarter edge-roll from a square archivolt immediately above the capital, as in fig. 8, which is a transition-Norman arch at Little Casterton, Rutland. Fig. 10 may conveniently be called the *broach-chamfer*. It is the way of changing the square into the chamfered edge without abruptness, or of blending the one into the other.

But there was another method of taking off sharp edges, which was introduced perhaps even earlier than the other, and exercised a much more direct influence in the formation of Mouldings. This was by rounding the edge instead of cutting it away. Hence arose the cylindrical roll or BOWTELL, which was afterwards made more or less nearly a circle by cutting out a small angular channel on each side. Fig. 6 is one side or face of an arch-moulding at Little Casterton, showing this method, which is given more at large in fig. 21. This at once suggested the contrast of light and shade, formed by hollows alternating with (relatively) projecting members. As this stage of our inquiry is extremely important, let us take a few more examples by way of illustration.

Fig. 11 is the section of a Norman pier-arch at Friesland,

Lincolnshire. In this the square edge is worked into a shallow triple roll.

Fig. 12 is an Early English pier-arch at Skirbeck, near Boston. Here the bowtell is formed by rounding the edge as before, and cutting a deep three-quarter hollow on each side. Thus the bowtell becomes attached only by a narrow neck, as was very usual in this style.

Fig. 13 is from Great Grimsby, and fig. 14 from Clee, both in Lincolnshire. In the latter church a Dedication-inscription still remains,* bearing the date 1192; and the other is of very nearly the same period. Both these are good examples of the same principle; and arch-mouldings of this kind are of constant occurrence in the Norman and Transition styles. The pier-arches in the nave of Peterborough Cathedral are moulded precisely in the same manner.

In considering the origin of the semi-cylindrical roll, or bowtell, the first element of mouldings, we must not omit to take into account the influence of jamb-shafts. In the Norman style, we observe that every nook formed by the receding under-ribs already described, is occupied by a detached column. Fig. 15 is from Adel Church,† Yorkshire, and illustrates this arrangement. Now this column seems at first to have borne a square-edged member, or sub-arch, which projected above the impost exactly where the jamb receded below it, and which was afterwards, in some cases, rounded off so as to correspond in form and size with the column itself. This may very clearly be seen in an early Norman doorway at Hauxton, near Cambridge. Hence, by omitting altogether the impost or capital, we get the idea of continuous mouldings. Of this subject, however, we shall speak more fully in treating of capitals and shafts generally. We would here only add, that the view we have taken of the forma-

* Given in the *Ecclesiologist*, vol. iii. p. 138.

† See "Churches of Yorkshire," Part VII, from which this example is borrowed.

tion of the recessed arch, seems to us more correct than that held by some, who suppose the rectangular nooks to have been cut out of the square or chamfered plane expressly for the reception of jamb-shafts.

Another form, which occurs frequently in the Transition Norman and Early English periods, is the POINTED BOWTELL, or pear-shaped roll, resembling, and coeval with, the introduction of the pointed arch. Its formation may be seen in fig. 16. which is the plan of a late Norman arch in St. Mary's Church, Ely. Something closely resembling this member often occurs in Norman work, between two cylindrical bowtells, as at A, fig. 13. Fig. 17 is a triple respond or half-pier, of very singular form, at Clee; and fig. 19 shows its use in an Early English arch at St. Benet's, Lincoln. In this case the under-edge is withdrawn at the point, which seems the origin of what is called the *scroll-moulding*, hereafter to be explained. Fig. 24 shows this form more at large.

The pear-shaped pier or shaft is of constant occurrence in Early English work; and as a general rule it may be stated, that a shaft may take almost any form to suit the primary moulding which it sustains on its capital, on the principle of continuous mouldings already alluded to.

Figs. 12 and 23 show the cylindrical and the pointed bowtells with the addition of a small fillet at one side. Fig. 22 is a groin-rib from Robertsbridge Abbey, where both sides are thus filleted. Fig. 18 is a groin-rib from Tinterne Abbey, where the fillet is at the end or central point. And fig. 25 is an Early English arch at Little Casterton, where there are three fillets. Of all these varieties we shall have more to say hereafter.

Fig. 1, Plate 2, is a pier-arch of very Early English date, at Middle Rasen. Fig. 2 is a doorway at Ludborough, fig. 3 the chancel arch at Langtoft, and fig. 5 the jamb of the archway of the south porch at Great Grimsby, all in Lincolnshire. The first three exhibit the use of the pointed bowtell.

The student will already have perceived, from the manner we have adopted of drawing the sections, first, that all these mouldings are *formed out of the solid block solely by removing edges and sinking hollows*, and must never be regarded as excrescences on a plane surface; secondly, and in consequence, that *the groups lie in the planes of the uncut blocks*, the outermost edge of each member touching the original or chamfered surface, that is, not being cut away so as to fall below, or short of it. The original planes, or uncut square surfaces, are represented in our engravings by dotted lines. These two facts must be regarded as fundamental canons in the arrangement of mouldings.

There are three planes in which mouldings will be found to lie: one parallel with the outer wall, which we shall designate the *wall-plane;* one at right angles to it, or parallel with the soffit, which may be called the *soffit-plane;* and the third, the plane formed by chamfering an edge, which was generally (not invariably) done at *an angle of forty-five degrees*, or the *chamfer-plane.* In fig. 10, Plate 2, A is the chamfer-plane, B the soffit-plane, C the wall-plane. It is clear that by sinking hollows in any one of these surfaces, a group of mouldings would be developed.

In considering any series of mouldings previously to copying them, the first point is to lay down on paper the various planes, that is, to ascertain the plan of the arch, or other feature, before the mouldings were cut. When this is done by accurate measurement, the rest of the process becomes comparatively easy, and the most complex and extensive combination, which it appears at first sight impossible to copy with anything like accuracy, may be readily disentangled, analysed, and sketched with precision. Without attending to these facts, all attempts to do so will be futile.

It may be alleged as a general rule, that Early English mouldings lie on the planes rectangular; that Decorated, according to their kind, fall either on these, or on the chamfer-plane alone; and

that Perpendicular mouldings almost always lie on the last. If some members seem to fall short of one plane, they will generally be found referable to some other; and if they fall on the segment of a circle, which is much more rarely the case, as in fig. 15, a pier-arch at All Saints, Stamford, the inclination must be determined by bending a ruler or piece of lead across them. Other difficulties and anomalies will occasionally occur, the various methods of overcoming which are yet to be pointed out.

Fig. 11 is an example of a moulding from Over, Cambridgeshire, truly copied according to the above rules. Fig. 12 is the distorted and inaccurate form it would probably assume if an unpractised and untaught draughtsman were to attempt to copy it by the eye.

Fig. 7 is an Early English moulding from the interior of the priest's door, Cherry Hinton. Fig. 8 is a pier-arch, and fig. 6 the northern doorway of the same church. Fig. 19 is a very fine moulding from the inner door of the south porch. The semicircle round the central group represents the capital of the jamb-shaft. Fig. 9 is a doorway, and fig. 13 a window-jamb, both from Over. These are early Decorated. Fig. 14 is a doorway at Madingley, and fig. 16 one at Trumpington, near Cambridge. These are both pure Decorated. Fig. 18 is a magnificent archmould from the doorway of St. Clement's church, Cambridge, showing the capitals of the two jamb-shafts. This is not an easy example to copy by the eye, for the central member in each group does not extend to the angle, but falls on the line of the chamfer. The observation of this circumstance immediately removes the principal difficulty.

This section illustrates a very common peculiarity of its style, which may be called the *triplicity* of mouldings. Whether constructive or symbolical, or (as a writer in the *English Review*, already quoted, imagines) suggested by philosophical principles of effect, we need not now consider, though symbolism may have had its influence, since the architects of the period greatly

affected representations of the mystic number THREE. This Moulding consists of three distinct groups, each group having three members. Occasionally each member has three fillets, so that there is a *triple triplicity* in the entire composition. It is clear, however, that if an archway has two sub-arches, or consists of three orders, the angle of each will naturally form a group of three rolls with a hollow on each side, as in fig. 5. Early English and Decorated Mouldings very often consist of three groups.

SECTION III.

OF COPYING MOULDINGS.

There are several ways of doing this. The best and simplest of all is by inserting the paper in a loose joint, or by passing a saw through an arch or jamb, or by applying a large sheet of paper where a stone has been removed, and left the edges sufficiently clear and sharp to trace their outlines by pressure against them, or by a pencil. These methods, however, are but seldom available except in ruined buildings, and even here we ought not to damage or destroy any portion of the little that is left. But many fragments of monials, groin-ribs, voussoirs, and other moulded stones, may be found in every old abbey; and these may readily be placed upon sheets of paper for the purpose of tracing their outlines. By these means alone a large collection of very valuable specimens may be made.

Another way is by the use of the leaden tape. A thin flexible riband of this metal, about a yard in length, may be rolled into a coil so as to be easily portable. By being manipulated and impressed upon the mouldings to be copied, and thence carefully removed, and laid upon a sheet of paper, it retains the exact

shape it has received, and may be traced off with a pencil. In this process, however, which requires both pains and practice to ensure tolerable accuracy, there are many difficulties to overcome. First, it is clear, that if the moulding extends over a considerable space, the tape, by its extreme pliability and great weight, is almost unavoidably bent in transferring it to the paper, which must be spread flat on the ground, or some level surface nearest at hand. If this should happen, the true bearings of the members, that is, their relative position to each other, are confused or altogether lost, and the copy is incorrect and worthless. Secondly, where the moulding is much undercut, or contains deep and wide hollows with a narrow neck, the lead, when fitted into them, cannot be withdrawn. In the first instance, it is better to copy only eight or ten inches of the moulding at once; or the planes in which the members respectively lie, (that is, a full-sized plan of the block jamb or arch) may be first marked out on the paper, and the tape adjusted to them; in the second case, it is advisable to carry the tape merely over the necks of the hollows, and subsequently to determine their breadth and width by inserting a measure into them. As Early English mouldings are often mutilated, from being so far undercut that portions of the projecting members have fallen or been broken off, the lead may frequently be manipulated into a part which is entire, and afterwards drawn upwards or downwards till it finds exit at a broken place. In all cases, dirt, moss, and whitewash must first be scraped clear away from the part to be copied, or the sharp and rounded edges, the depth of the hollows, &c. cannot truly be ascertained.

In using the tape, the rough draught of the pencil must invariably be corrected by close comparison with the original, and every separate member should be tested as to size, projection, bearing, and curvature, by the aid of the measure. A pair of compasses with the ends bent inward is very useful in obtaining the breadth of the members; and if furnished with a segmental

scale-bar, or slide affixed to one leg and passing through the other, the width of the neck of each undercut bowtell may be exactly marked. Sharp indented edges and angular hollows cannot be closely copied with the leaden tape, so that these especially must be supplied by the eye.

There is a process similar in its nature and results to the use of the leaden tape, which is very successful where the mouldings are not too much undercut. This is technically called *squeezing*, and is practised by applying wet clay, plaister, or a composition purposely prepared of wax and some other ingredients, to the part to be copied, the form of which is thus readily and accurately obtained, though the convex and concave surfaces are of course reversed. By pouring plaister of Paris into the matrix thus formed, the original moulding is exactly copied. But in the case of undercutting, the difficulty is here insurmountable.

A beautiful and ingenious instrument has been invented by Professor Willis, and called by him the Cymagraph, by which mouldings may be copied with the most perfect accuracy, and of the full size. It is described and illustrated in the *Engineers' and Architects' Journal*, No. 58. It can hardly be successfully used without a little practice; but the most extensive and complex mouldings can be taken by its aid. The only disadvantages are, that the instrument, though by no means large, is an inconvenient appendage to the equipment of a pedestrian, and that only a few inches of a moulding can be taken at once; so that a number of separate pieces of paper must be pinned together on the spot, and that with great accuracy, or the planes and bearings will be incorrect.

Geometric methods, both of copying and reducing mouldings, are fallible; for the members and curves were very often drawn *libera manu*, especially in earlier work; so that very considerable deviations from geometric precision must be expected in observing ancient examples.

Another, and for ordinary purposes much the best and simplest

way, is to copy by the eye alone, on a reduced scale, adding the measurements of each face, as in fig. 12, Plate 1. If the *particular* measurements of each member are required, they should be given in respect of a horizontal and a vertical plane, as in figs. 20, 21, 22, Plate 2. This is rather a troublesome process, and is apt to produce a complex diagram. Generally, it is enough to give the whole breadth or width of a series of mouldings, which is simple and easy when they lie in one plane, as in fig. 1, Plate 3, an Early English doorway at Louth. The depth to which hollows are sunk from the surface of any plane may readily be added, as fig. 3, Plate 8.

It is well, in copying mouldings, to *adopt uniformly* the plan already pointed out, of drawing the outer wall-line parallel with the bottom of the page, and the soffit parallel to the side. The same side of a doorway or a capital should be taken in all cases where it is possible, to avoid the natural awkwardness of presenting to view the position of mouldings drawn promiscuously right or left.

The practice of copying mouldings by the eye alone is of the greatest importance in acquiring a sound acquaintance with the subject. It is indeed, as we have before stated, indispensable. The eye becomes perfectly familiar with every kind and variety by frequently contemplating new examples and collections previously made; and thus a very great degree of accuracy is in time attained, and a perfect copy of the ordinary and plainer mouldings, with their measurements, may be made in two or three minutes. In this way also mouldings which are quite out of reach may be sketched very tolerably at the distance of many feet, if the planes in which they lie be carefully attended to.

These two points, the planes in which mouldings lie, and the relative proportions of the parts, must be invariably observed, and the practised eye will seize the outline almost instinctively, with a very close approximation to truth. It may be remarked, that in the example given by Professor Willis, in his "Architec-

tural Nomenclature," from the Journal of William of Worcester, the plane is marked by a line, as in the illustrations of the present work.

In copying the mouldings of capitals, measure the depth from the top of the abacus to the under side of the astragal, or neck; and the projection of the abacus over the shaft. Both these are easily taken by dropping a small plummet (a string with a bullet is best) from the outer edge of the abacus.

We have observed that edges are generally chamfered at an angle of forty-five degrees. But as this is by no means invariably the case, it is highly important in every instance to put it to the test. There are two very simple and effective means of doing this. One is by bending the measure at its joint (fig. 15, Plate 2) by which the angle can be accurately transferred to the paper, however small the copy may be; the other by the use of a right-angled triangle of wood or brass, by applying the hypotenuse of which to the chamfer, the two sides will be respectively parallel to the wall-plane and the soffit-plane, if the chamfer is at an angle of forty-five, but not otherwise. In the latter case, which is quite the exception, the former method may then be adopted with advantage. See fig. 12, Plate 5.

Full-sized mouldings are reduced by the use of the well-known instrument called the Pentegraph. All other methods require both time and care. Every member may be reduced separately by means of the compass and scale; or circles may be drawn, inclosing certain portions of the copy, and repeated of the proportionate size in the same positions on the reduced drawing.

SECTION IV.

OF EARLY MOULDINGS IN GENERAL.

Having thus far explained the general principles and the methods of drawing mouldings in section, we will revert to the theory of the first formations of mouldings, on which more remains to be said.

The first and rudest attempts at moulding which we observe in this country, are the rough and coarsely chisseled members, generally semi-cylindrical, which occur in the Ante-Norman chancel-arch at Wittering, Northamptonshire (fig. 10, Plate 3.), the balustre shafts in the tower of St. Benet's, Cambridge, and other churches of that date, to which must be added the very curious and antique attempt at a moulded architrave on the impost of the belfry-arch at Barnack. This last example, an exact parallel to which occurs in a doorway* of the Romanesque palace of Theodoric at Ravenna, and, indeed, the very nature of the case, would lead us to conclude that the earliest element arose out of a desire to relieve, by coarse irregular channelling, a plain flat surface. And a square-edged rib easily became a cylindrical bowtell, by first chamfering, and then removing indefinitely the angles. Thus, for instance, Norman string-courses often consist of a square projecting fillet, with the angles chamfered off, so as to form a semi-hexagonal projection. St. Sepulchre's Church, Cambridge, affords, both in its groin-ribs and pier-arches, an excellent illustration of the first idea of forming rounds by removing edges, and of setting off the parts thus rounded, by sinking a small channel or furrow on each side a little below the surface. Thus, then, a square-edged arch, with its sub-arch or soffit-rib, was either worked into rounds at each angle (fig. 1, plate 4.), or into pointed rolls, as fig. 2.

* Engraved in Mr. Gally Knight's Italian Architecture, Part I.

which is an arch at Reymerston, Norfolk, circa 1200, or some edges were chamfered, others worked into rolls, and the sub-arch cut away into a broad semi-cylindrical rib, as in fig. 4, which represents a semi-Norman arch at Barholme, Lincolnshire. Figs. 7 and 8 are groin-ribs; the one from Glastonbury, circa 1200; the other from Peterborough, Early Norman: both clearly and satisfactorily exhibiting the formation of the roll-moulding or bowtell.

The deep hollow, by which the contrast of light and shade was obtained, was an after thought, which was not developed till the Early English period, when it was carried to an extravagant excess, so that roll-mouldings were extensively undercut, or attached only by a small neck of stone; thus having the effect of a series of detached arches or ribs, rising in succession above and behind each other, each independent and unconnected, the eye being unable to penetrate to the depth of the dark hollow. Fig. 5 is a very Early English pier-arch, at Barnack, in which the first appearance of the deep hollows may be traced.

The roll-moulding being once introduced, it became natural to multiply it as an ornamental feature to an unlimited extent; and, to prevent sameness of effect, many modifications in the forms of the projecting members were introduced, as well as considerable variety in the size and depth of the alternating hollows. Now multiplication naturally implies reduction in size; so that, in place of two or three heavy round mouldings placed at the angles only, and without hollows of any great depth, we find a whole series of minute and skilfully diversified members, designed not on any exact geometric principle, but regulated by taste, effect, and no doubt, to a certain extent, by caprice. We may suppose the architect to have drawn on a board or a stone, with a free hand, the outline to be followed in working out the hollows; and fig. 3 represents such a stone, with the profile scratched or marked on its surface. The templet,

being applied to every stone to be worked, afforded exactly the same shape for each, so that the pieces, when put together, coincided with perfect accuracy.

Deeply recessed archways consist of several courses of moulded stones, each joint being overlapped by the stone next to the back of it. When the mouldings are meagre, the arch generally consists of a single row of vonssoirs. In taking a moulding of the former kind, it is well to mark the joints of the different courses.

The grouping and multiplying of members was greatly facilitated in its development by the Gothic principle of distributing weights and thrusts under a number of different supports. Thus each group of arch-mouldings in an Early English doorway is borne by a detached jamb-shaft below the impost. In later times, the shafts were engaged in the wall, and at the latest period the roll-mouldings were often continuous, but with small pseudo-capitals and bases attached after the manner of real columns.

The Norman architects never got much beyond the plain semi-cylindrical roll. They paid so much attention to surface sculpture and shallow ornamental work in the archivolts and soffits, that the notion of alternate hollows and projections does not appear to have been fully comprehended by them, or, if so, was found to be incompatible with the enrichment by shallow superficial detail. It was reserved for the period of Transition to effect this.

The invention of the pointed bowtell, contemporaneously with the pointed arch, opened the way to a great number of new forms, all more or less referable to this common origin, and all used with the most refined taste in varying the members of complex Early English groupings. The first and by far the most important of these, is the ROLL-AND-FILLET, fig. 4, Plate 2, and fig. 20, Plate 1, a doorway in the precinct of Lincoln Cathedral. The introduction of this new feature may be said to have

wrought a complete revolution in the system of moulding. It is the key-note of almost all the subsequent formations. It may be defined to be a flat bead set rib-wise on the surface of a roll-moulding, at first with a square under-edge, as fig. 18, Plate 1; afterwards, and most commonly, with a slope or ogee curvature, as in fig. 17, Plate 2, a groin-rib from Tinterne Abbey. It is not certain at what precise period, or from what cause, the fillet was first added to the cylindrical bowtell. It is probable that the idea of a surface-line having been suggested by the pointed bowtell, the fine feather edge was either cut off (fig. 9, Plate 4) or was throated or widened, so as to produce a more prominent effect. As, however, it will be found in the earliest examples that this fillet usually falls in a line with the chamfer-plane, as in figs. 9, 15, 19, Plate 2, and in fig. 6, the north doorway at Cherry-Hinton, it may possibly have been left as a standing portion of the uncut surface: a view which is certainly borne out by the general analogy of moulding. The position of diagonal projection is undoubtedly the ordinary one throughout the Early English period, and the fillet is not often found coincident with either of the other planes, as in fig. 8, a pier arch from Cherry-Hinton, till towards the end of the thirteenth century. Still, examples are not wanting in much earlier moulding; so that it is not intended to insist on this theory of its origin.

SECTION V.

OF EARLY ENGLISH MOULDINGS.

We may define the characteristics of the mouldings of this style to be, deep undercut hollows between prominent members, which comprise a great variety of pointed and filleted bowtells,

clustered, isolated, and repeated at certain intervals, a great depth or extent of moulded surfaces, and the general arrangement in rectangular faces, as shown in fig. 5, Plate 2. The hollows are seldom true circles; and, like the projecting parts, they assume a great number of capricious forms. Figs. 2 and 3, Plate 3, would alone be quite sufficient to convey to the eye an idea of the general method. The first is the belfry arch at Plymouth, the second the pier-arches in the choir of Ely Cathedral. Both were taken with the cymagraph, and are reduced to a scale of half an inch to a foot. Neither of them are arranged in exact planes; and the student must be fully prepared to find a great many instances of still greater irregularity in this respect.

Early English mouldings may be said to comprise the following members:—

1. The plain bowtell or edge-roll.
2. The pointed bowtell.
3. The roll-and-fillet.
4. The scroll-moulding (rare).
5. Angular forms, consisting of chamfered ridges and intervening projections, of irregular character.

The other forms chiefly consist of modifications of the roll-and-fillet, which are so capricious as almost to defy any attempt to assign them distinct names and formations. It will be right, therefore, briefly to point out some of the most commonly occurring varieties, leaving a more particular investigation to the student's own exertions.

The roll-and-triple-fillet, (fig. 25, Plate 1; fig. 3, Plate 4, A.) is much used in the more advanced buildings of the style, and was the favourite form during the reigns of the first two Edwards. The ordinary roll-and-fillet projecting from a ridge, (fig. 5, Plate 6; 12, Plate 7,) each side of which is undercut by a deep hollow, naturally produces, and therefore probably

suggested, this compound moulding. It will be observed in figs. 5, 6, 9, Plate 5 ; figs. 7, 8, Plate 7 ; figs. 12 and 13, Plate 2. A common form is shown at large, fig. 10, Plate 4. Sometimes only one side has a fillet attached (figs. 12, 23, Plate 1). Sometimes there are two fillets, one at the top, the other on the side, fig. 3, Plate 5. Figs. 11 and 13, Plate 2, are varieties of very frequent occurrence. Fig. 12, Plate 4, is a form often found in labels, as fig. 13, both from Lincoln Minster. This diagram also illustrates the fillet as it were depressed into the roll. Fig. 11 is the chancel doorway at Ludborough, Lincolnshire, which shows some other varieties. Fig. 15 is a groin-rib from Furness Abbey. Figs. 4 and 7, Plate 3, are groin-ribs from Robertsbridge Abbey ; 5 and 6 are fragments from Tinterne and St. Mary's Abbey, York. Fig. 9 is the arch-mould of a double piscina with its capital, from Histon, near Cambridge.

The members in fig. 11 fall wholly on the chamfer-plane, as in fig. 1, Plate 3, which is seldom the case in this style. Three pointed rolls placed together, somewhat in the form of a fleur-de-lis, form a combination of very frequent occurrence. It may often be found between the detached shafts of large doorways, as at Peterborough and Ely, and indeed in any position, with many minor varieties of shape. Fig. 21, Plate 4, and 5, Plate 2, are examples. In some cases it closely approaches the character of the roll-and-triple-fillet, as 6, Plate 5, the beautiful Decorated window-jamb at Northborough, Northamptonshire.

In Decorated work the fillet became extremely broad, (19, 4,) often as much as three, or even four inches. In this case it may be said to lose its original character, especially in clustered piers, where it very often occurs, as in those to the east of the octagon at Ely. But in Early English it is almost always a narrow edge-line. If set square on the roll, it is generally a sign of early work. See the outline diagrams in Plate 4. The

depressed and elongated forms on each side of fig. 11 are principally found in later buildings, the first in Decorated, the latter in Perpendicular.

We have said that a great degree of licence is observable in the forms of all roll-and-fillet mouldings, in respect of size, shape, and composition, and that geometric accuracy was avoided in a rather remarkable manner; the irregular shape, (almost like a vegetable growth or a lump of manipulated clay,) and the freely undulating curve, having been commonly preferred. Almost every conceivable modification of the plain roll peaked, depressed, elliptical, grooved at the end,—throated, isolated, and combined,—might be found and catalogued by a careful observer.

An important form, generally considered distinctive of Decorated, but not very uncommon in advanced Early English work, is the SCROLL-MOULDING; so called from its resemblance to a roll of thick paper, the outer edge of which overlaps upon the side exposed to view. It may be described as a cylinder, the under half of which is withdrawn, or shifted a little behind the upper. We shall find it almost universally used in the abacus and neck of Decorated capitals, and very often in strings and base-mouldings.

It is certain that this form was known and in use even in very early mouldings. Fig. 19, Plate 1, from St. Benet's, Lincoln, is a proof of this. It also occurs, perhaps in an accidental or undeveloped form, in fig. 3, Plate 2. As the fillet is not generally set square on the roll, and when it is so, is a mark of earlier work, so the edge of the scroll-moulding is usually rounded underneath,* except in the earlier instances, when it is almost always square, (fig. 20, Pl. 4,) and usually also the under half of the cylinder is more deeply withdrawn. It is represented in fig. 14, Plate 4, an Early Decorated doorway at

* The ancient name in this case was the *ressant lorymer*. Architectural Nomenclature, p. 9.

Yaxley, Hunts., and in figs. 11 and 16,—the latter an arcade in Lincoln Minster. Here we have the unusual combination of the scroll-moulding and the side-fillet. Fig. 5, Plate 7, is a fragment from Rievaulx Abbey. Fig. 7, the rich and beautifully moulded doorway at Northborough, circa A.D. 1300, exhibits the scroll form on the interior border.

The origin of this moulding we have been unable with any certainty to ascertain. It may perhaps be regarded as a roll-and-fillet with one side left uncut, either because it was removed from sight, or afforded a more convenient and effective drip in strings and weatherings, where it most constantly occurs. The shadowed edge-line was presented by the scroll-moulding as well as by the roll-and-fillet; and the principles of effect which suggested both forms are probably identical. The scroll-edge is rarely inverted, so that the withdrawn surface is placed uppermost, as in some of the bases at Tinterne Abbey (fig. 33, Plate 14).

Two rolls-and-fillets conjoined at their bases, so that their respective fillets are at right angles to each other, constitute the DOUBLE-OGEE, or *double-ressant*, as it was anciently called,—one of the commonest mouldings of the Decorated and Perpendicular styles. It is rare in Early English, and apparently the result of accident rather than intention when it does occur, as in fig. 12, Plate 4. Fig. 1, Plate 7, is the west doorway of Llandaff Cathedral, of pure Early English detail. The capitals which bear the two mouldings in question are marked in outline. Fig. 6, Plate 4, is a Decorated moulding of sufficiently common occurrence, (as in the belfry archway at Trumpington,) where the shafts which carry the capitals are set together so as to form the double ogee. And the same may be constantly observed in the common arrangement of Early English and Decorated piers, figs. 14 and 15, Plate V. See also fig. 17, Plate 2.

Early English arch-mouldings are so easy to distinguish from

all others, that it is not necessary either to say more in the mere explanation of their peculiarities, or to give a great number of examples. They are by far the most difficult of all to copy with exactness, from the irregular and capricious forms of the curves and undercuttings; and their great extent, often many feet across, renders it an extremely tedious process to draw any of the rich and complex examples on a reduced scale. The very deep and dark hollows constitute the most characteristic difference between the mouldings of this and those of the succeeding style, in which most of the forms already enumerated will be found to recur. But we lose the extravagant display of deep cavernous undercutting in Decorated mouldings. We there find a hollow of three-quarters of a circle, accurately formed with the compasses, in the angle of every receding subarch, as in fig. 2, Plate 6, the west doorway at Hingham, Norfolk, fig. 11, the inner doorway of the south porch at Deopham, and fig. 12. the same from Benington, Lincolnshire. And these hollows must be particularly observed as *the real division of the orders of mouldings when they all lie on* the chamfer-plane. The Decorated hollows are usually of larger size than the Early English; and there is this general difference in their use, that *in the Decorated they divide groups, in the Early English, individual members.*

The exquisite skill, taste, and patient labour invariably evinced in the working of Early English mouldings, are truly admirable. The ingenuity that was never at a loss in any difficulty of finish or constructive irregularity, and the minuteness with which even the most concealed and darkened parts were executed, are circumstances of much interest, if we contrast the hasty and economical practice of the present day. The deepest hollows are all as cleanly and perfectly cut as the most prominent and conspicuous details; and in the village church as much so as in the most glorious cathedral. An Early English doorway is often a wonderful piece of art, however little it may attract the

attention of ordinary observers. It is most pleasing to notice the long trails of dog-tooth lurking in the dark furrow of a label or chancelled recess; to see the end of some inconvenient member got rid of by throwing a flower across the point where it suddenly stops or dies into the wall; to admire the effloresceut boss and the foliaged capital intruding their luxuriance upon the mouldings and hollows, as if they had overgrown their original and proper limits. How beautifully, too, the knots of pierced and hanging leaves extend like some petrified garland or bower of filigree work round the arch, dividing the plainer mouldings into groups, and almost imparting life to the very stones! There are abundance of doorways of this style which exhibit the most delightful varieties in their forms and groupings; always, yet never the same. Some examples occur at Bolton and Furness Abbeys, whose arch-mouldings extend five or six feet in width. The west fronts of several of our Cathedrals have Early English doorways of amazing magnificence. Alas, that we should now try to borrow an unreal splendour by "*running*" archways by the yard in vile terra-cotta or viler patent cement! And strange, that with such noble examples of rich perspective effect and artistic display before them, our architects will generally persist in inventing mouldings for themselves, rather than copy any of the perfect works of ancient art which are everywhere to be met with, and of all degrees of costliness. The wretchedness of modern mouldings can only be appreciated by those who take the pains to compare them with the ancient.*

* Mr. Rickman's moulding to the central gateway in the cloisters of St. John's College, Cambridge, is partly Early English and partly debased Perpendicular. It has besides its poverty of effect other serious faults.

SECTION VI.

OF DECORATED MOULDINGS.

The student will bear in mind that the *details* of Decorated mouldings are for the most part identical with those of the preceding style, with the addition of some new members, and several important modifications of grouping. And the latter will be found to produce an entirely different effect, though in description the distinction may appear very trifling. The eye must be familiarized to the profile and general appearance of mouldings of different dates, so that, without dismembering, and, as it were, analysing the group, or examining the separate details, it may discern at a glance the style to which any example belongs. And this may be done with a considerable degree of certainty by practice and attention; though we are not prepared to assert that *all* the differences of style admit of being reduced to unvarying and infallible rules. We sometimes meet with mouldings of much earlier or later date than we should have expected from other characteristic marks in the building; and there are not a few instances in which, without the aid of such marks, it would be impossible to say whether a moulding is of the fourteenth or the fifteenth century. In fact, this science does not appear capable of more than general treatment; though there is quite enough of uniform system to enable us to apprehend the broad distinctive principles which obtained in the different periods.

Generally, then, we observe much greater geometrical precision in drawing both the hollows and the projecting members than prevailed in the preceding style. Segments of circles, both concave and convex, were much used; and there was a softness of blending, a delicacy and gentleness of grouping, an avoidance

of strong and violent contrasts of light and shade, which imparted a more pleasing, though much less striking, effect. There can be no doubt that the perfection of moulding, as of all architectural detail, was attained in this style.

And yet rich Decorated mouldings are of rather rare occurrence. A great many of the finest buildings in this style scarcely afford as good examples of moulding as the smallest and humblest church of the Early English age. Very often plain chamfers are used in all the windows, doorways, and pier-arches; while minor parts, such as bases, capitals, sedilia, sepulchral recesses, and the like, have fine and elaborate details. It is in this kind of work that we must look for the best mouldings in the Decorated style. In arches, doorways, and windows, the plain chamfer of two orders (fig. 5, Plate 1) is perhaps most commonly found. Windows especially are often singularly meagre in their mouldings, however rich their tracery may be. The monials stand near the outer surface of the wall, and separated from, or recessed behind it only by a single order with a plain or hollow chamfer, as figs. 20 and 21, Plate 7. Sometimes, indeed, (as at Over, near Cambridge,) the tracery of good Decorated windows stands quite flush with the wall, so that the jamb-mouldings are, as it were, entirely omitted. And again, as in the Chancel at Grantchester, the monials and tracery often consist of merely chamfered planes externally; and so, fig. 20, Pl. 7, the East window at Trumpington. Fig. 19, a window at Hingham, Norfolk, is one degree richer than this, two orders being introduced in the monial, though of equally plain character.

There appear to be three distinct kinds to which Decorated mouldings may generally be referred; though there are many examples which it might be difficult to assign to any one of them. These are:—

1. The plain or hollow chamfer of two or more orders, which, properly speaking, is only the step preparatory to moulding, and stopping short of that ulterior process;

2. Roll-and-fillet mouldings, with hollows between each member, nearly resembling, in principle and arrangement, the Early English method, as fig. 12, Pl. 5,—a doorway at Attleborough, Norfolk.

3. A succession of double ogees, divided by hollows of three quarters of a circle, as figs. 9, 11, 12, 14, Plate 6. Fig. 16, Pl. 2, is similar in kind, and both of these are exceedingly common mouldings in this style. It is not uncommon to find these two varieties combined, as in fig. C, Plate 7,—the belfry-arch at Deopham, Norfolk. And as they rarely occupy any other position than the chamfer-plane, it seems proper to regard them as virtually the plain chamfered edges of class 1, slightly relieved from their flat and naked form. Their distinctive peculiarity consists in the repetition of the same members in each order, though, as we have observed, other varieties of the chamfer are sometimes intermixed. Thus fig. 11, Plate 6, might be described in words thus:—"A double-ogee order between two hollow-chamfer orders, divided by three-quarter hollows; all lying in the chamfer-plane of 45°; total width across, twenty-three inches."

The plain or hollow chamfer is extremely common in all jambs and archways, (especially if they be continuous, or have no imposts or jamb-shafts,) in the Early Decorated style. The inner angle which divides the orders, (and which has been called the *re-entering angle*,) is either left solid, or cut into a deep three-quarter hollow. Of this latter arrangement, which produces a very bold and good effect, it might be difficult to name a better example than the west doorway of St. Mary's, Ely. Here the chamfers are hollow, or quarter-circles. In such cases there are often trails of ball-flowers, quatrefoil paterae, roses, or other ornamental leaf-work disposed at regular intervals, and repeated in rows in two or more of the orders. See 2, Plate 6; 10, Plate 7.

The second kind is generally, but not always, early in the

style; and it is perhaps the most perfect and beautiful of all. The members in this case usually fall in squares, (that is, on the wall-planes and soffit-planes in succession,) as in the west doorway at Trumpington Church, fig. 3, Plate 7. Sometimes mouldings of this class are combined with those of the third, as fig. 11, Plate 5, the Priest's door at Hingham, Norfolk, and fig. 1, a monument at Boston. Figs. 6, 7, 8, 12, Plate 7, are all of this second kind.

While mouldings of the second kind are generally borne by jamb-shafts, as in the Early English style, (now engaged in, and not detached from the wall,) those of the third are almost always continuous, except in pier-arches, where they constantly occur. Thus, fig. 4, Plate 7, is a pier-arch at Trumpington; fig. 3, Plate 6, one at Hingham. Sometimes a series of four or five of these together, as fig. 12, 6, gives a very deep and rich effect to a doorway. It is not uncommon to find one member of a double ogee considerably larger than the other, or those of one order of different size from the others. It must be particularly observed, that in the third class of Decorated mouldings, the fillets on each side of the three-quarter hollows almost invariably stand at right angles with each other, the principle of which is shown at fig. 3, Plate 5,—the west doorway at Attleborough, Norfolk. Exceptions such as fig. A, Plate 7, are seldom found in *ancient*, but very often in *modern* mouldings. We may further observe on fig. 3, 5, that if the sides of the re-entering angle are equal, the chamfer-plane is the diagonal of a square, that is, it forms an angle of 45°. So, in fig. 2, 7, the angle of the chamfer-plane is ascertained by measuring the two sides of the central nook.

Mouldings are either *simple* or *compound*. A simple moulding is a plain single form, complete in itself, as a bowtell, or three-quarter round. A compound moulding is either composed of two or more distinct parts, as a roll-and-fillet, a double ogee; or involves a profile of reflex or double curvature. This is

properly the character of the ogee itself, which is formed by a segmental inward curve conjoined continuously with a similar outward curve. Of the same kind is a very important and universal Decorated form, which may be called the *undy-bowtell*, or WAVE-MOULDING, from its gently undulating outline. It is represented in figs. C, 9, 17, 18, 19, Plate 7, and elsewhere. It is composed of two ogee curvatures, forming a central bulge or entasis, sometimes projecting forward beyond the edges, but usually in the same plane with them. Scarcely any method of moulding is so common in, or so characteristic of, this style, as two orders of the wave-moulding, with a hollow in the angle between them, fig. 17, Plate 7. The formation of this detail may probably be traced to the half of a triply-filleted roll, fig. 10, Plate 4, the other half being considered as undeveloped, or merged in the block. There are several modifications of it: the edges are either sharp, as fig. 17, or there is a small width of the chamfer-plane left uncut on each side, as fig. 11, Plate 5. The former is most common in Decorated, the latter in Perpendicular: but all the varieties of this moulding appear to occur without any definite distinction throughout both periods. Yet it is so much more common in Decorated work, that its occurrence may, in default of other proofs, be taken as a presumptive evidence of the style. It is also wider and shallower in early than in late work; that is, the hollow is less deep, and the entasis less bulging. Sometimes, indeed, the wavy line is so faint as to be scarcely different from the plain chamfer, as A, Pl. 7. And sometimes we find nothing more than a flat surface sunk between two raised edges. See B, Plate 7, and the lowest order of fig. 8. This may be termed the *sunken chamfer*.

Another variety is shown in figs. 13, 16, 23, Pl. 7. This appears to have arisen from cutting down to an angle, instead of scooping out in an ogee curve, one end of the member. It is generally a mark of Transition to Perpendicular.

A rare form is exhibited in fig. 16, Plate 5. It may be called

a double wave-moulding. By cutting the central hollow down to an angle, (as shown in the shaded part,) a double ogee would be the result. This moulding occurs in the Decorated belfry arch at Stretham, Isle of Ely.

The ogee moulding is a form so extensively used, and so difficult to explain fully in its origin and varied relations, that we must begin by professing our inability to do more than point out its general and leading characteristics. In respect of its origin, the ogee curve is so prevalent in the Classic styles, that we might easily suppose it was thence imported into the Gothic, were there not abundant opportunities of self-development presented by the varieties of the roll-and-fillet. It is believed that the ogee scarcely, if ever, occurs in Norman architecture, in England at least, whatever may be the case in the Romanesque edifices in other countries. We have already observed its occasional appearance in the Early English style, where, however, it is very sparingly used. What we would now especially point out is this: that *whenever* the ogee occurs in Decorated mouldings, it always suggests to the mind the idea of one side of a roll-and-fillet. In its most ordinary position in a window-jamb, it actually corresponds to a perfect roll-and-fillet in the monial, as figs. 9, 10, 11, Plate 7, and here it must, of course, be regarded literally as half of that member. Since, however, the quirked ogee, (see fig. 2, Plate 16,) so common in Classic edifices, is identical in form with this part of a monial, (fig. 3,) it seems extremely difficult to decide how far the form was introduced from this or that suggestion. Again, we have seen that the wave-moulding, which contains an ogee curve, may be regarded as a modification of the roll-and-fillet; so that it would not perhaps be saying too much, if we should vindicate for Gothic architecture the self-development of the ogee, rather than refer it to an imitation of uncongenial Classic details.

The following, therefore, are the principal forms found in Decorated mouldings:—

1. The roll-and-fillet.
2. Roll-and-triple-fillet.
3. Ogee.
4. Double ogee, or double ressant.
5. Scroll-moulding, or ressant lorymer.
6. Wave-moulding.
7. Plain or hollow chamfer.
8. Sunken chamfer, (B, Plate 7.)

It is difficult to give a name to the form shown in 16, 7, and perhaps it is not of sufficiently frequent occurrence to render a particular term desirable.

We might add other minor varieties of form which are principally found in Decorated work. Sometimes we find a semicircle sunk in the chamfer-plane, as fig. 6, Plate 6, a doorway at Deopham, Norfolk, fig. 14, Plate 7, a fragment from Rievaulx Abbey, and fig. 13, Plate 6, a very fine archway at Hardingham, Norfolk, and fig. 14, 5, a window at Hingham.

The bowtell, or three-quarter round, is used, but rather sparingly, in Decorated work; it was extremely common in Perpendicular. Fig. 18, 7, is a doorway of Transition date, at Swanton Morley, Norfolk, in which the bowtell occupying the centre forms an engaged shaft. It also appears in figs. 1, 3, 5, Plate 5, all of which are late in the style. Sometimes the bowtell is seen in juxta-position with the sunken semicircle, as in figs. 1, 4, 5, Plate 5.

In fig. 6, Plate 7, a window at Fen Stanton, a small tongue-shaped member projects from the inner side of the principal roll-and-fillet. This should be noticed as a very characteristic detail of Decorated mouldings of the second class, to which this example belongs. A combination extremely common in labels and capitals is shown in fig. 48, Plate 16. This occurs also in jambs and arches, as fig. 14, Pl. 2.

Fig. 9, Plate 5, and 14 and 15, Plate 6, show the method of principal and secondary monials. The mouldings are of course

coincident in every part of the tracery and monials, and in the corresponding parts or planes of the jamb; so that, for shortness' sake, architects generally draw double monials as in these examples, merged into one another. Thus the outer edge represents the actual profile of the jamb, which, as being identical in detail, may of course be also taken to represent one side of the monials. Fig. 9, 5, is the inner jamb of the east window at Heckington; fig. 14, 6, the same part of a window in the Chancel at Boston; fig. 15 is from Stoke Golding, Leicestershire.

When a window has primary and secondary monials, it is obvious that they carry distinct planes or orders of mouldings. Yet these orders are not always of the same nature as those we have before described as such, namely, the group of members constituting the separate sub-arches; for the face of the smaller monial often falls within or behind that of the larger only by a single retiring step, or member of a group. Thus, in 14, 6, both the monials combined carry (properly speaking) the same order, but different members of it.

The plane in which the mouldings of the jamb lie is seldom coincident, as in the last example, with that on which the side of the monial is arranged, for this would in most cases give too great thickness to the latter. The difference of inclination is sometimes very slight, but this point must be carefully attended to in copying mouldings. See fig. 5, Plate 8.

In Decorated windows, the face of the monials is generally a flat edge or fillet; but in some early examples, a roll-moulding is carried all round, and is furnished with small bases resting on the cill. This roll-tracery is very common in Perpendicular windows; and sometimes, as at the west end of King's College Chapel, it has small stilted bases in the jamb.

Many Decorated windows have shafts in the jambs and monials both internally and externally. This produces a very fine effect, especially when the primary monials carry a triple, the secondary a single shaft. In these cases the mouldings of

the tracery follow the common law of pier-arches and shafted doorways, that is, they are different above the capitals. Ordinary windows, on the other hand, follow the principle of continuous archways.

The labels or hood-mouldings of the date of Edward I. and II. are often undercut by a three-quarter circle, sunk in the surface of the wall, as in figs. 1 and 10, Plate 6, doorways at Little Ellingham, Norfolk, fig. 8, the north doorway at Hingham, and fig. 13, at Hardingham. This latter example is unusually bold and deep. It measures three feet across from the outer face of the label to the soffit, and the effect is remarkably fine. Fig. 5 is the interior of a window-jamb at Sleaford. Fig. 7 from a monument at Boston, the soffit at A. Fig. 4 is the moulding of the pier-arches in the same church, of unusual and decidedly early character, though of rather late Decorated date.

Fig. 2, Plate 5, is a doorway at Great Ellingham. It closely resembles fig. 6, Plate 6. Fig. 4 is the inner doorway of the south porch at Boston. There is a close resemblance in the composition of this and of fig. 1, a monument in the same church, betraying the hand of the same artist. This resemblance should always be attended to, not only in the same church, but in the neighbouring edifices, because a strong presumption of coeval date is thence to be derived. And monuments especially were so often inserted subsequently, that it is very important to compare the mouldings with other parts of the same church. The character of these two examples is rather late; and they are wiry and poor in their effect, from being cut away too deeply and widely from the block surface.

Fig. 5, Plate 5, is from a fine Decorated tomb at Ewerby, Lincolnshire; a noble structure, which almost rivals its immediate neighbour, the celebrated St. Andrew's, Heckington. This moulding is a good and effective composition. It is shown in perspective, to illustrate the singular difference in appearance which exists between the same moulding exhibited in section

and in elevation. The roll-and-triple-fillet invariably produces a fine effect in mouldings of this style. Its edge-lines are sharp and delicate, and the profile beautifully relieved by the deep side-hollows with which it is necessarily connected.

Fig. 7 is the interior of a window-jamb at Benington, Lincolnshire, and fig. 10, the exterior of the same. Fig. 8 is the interior of a window-jamb at Heckington. Fig. 13 is one side of the belfry-arch at West Keal, Lincolnshire.

Fig 8, Plate 7, is the outer archway of the west entrance to the precinct, Peterborough ; a very fine Decorated group. Fig. 9 is a very common plan of a Decorated window. It is taken from Yaxley, Hunts. Fig. 10 is from Clipsham, Rutland,—a window which is elegantly enriched by a trail of ball-flowers in the hollow chamfer of the outer order. Fig. 12 is a Decorated window from the Chancel at Over;* Fig. 11, from Horbling, Lincolnshire. This also is a very common form in Decorated windows. Fig. 13 is from the outer porch doorway at Northborough. Fig. 15, a groin-rib from Rievaulx Abbey ; fig. 16, a doorway from West Keal ; fig. 21 is a window from the fine Decorated Chancel at Keddington, or Ketton, Suffolk. Fig. 22, the moulding at the angle of a piscina, Thurlby, Lincolnshire. Fig. 23, the south doorway at Langtoft, near Market Deeping.

SECTION VII.

OF PERPENDICULAR MOULDINGS.

In mouldings of this style we shall at once perceive a debasing influence in the comparatively meagre, *save-trouble* method of

* A remarkable structure, with window tracery and other details approaching Perpendicular, but with pure Decorated mouldings.

working them. Large and coarse members, with little of minute and delicate detail, wide and shallow hollows, occupying spaces which, in early work, would have been filled with groups of separate mouldings; hard wiry edges in place of rounded and softened forms, and general shallowness of cutting, are all conspicuous characteristics. Add to these, that their general arrangement on the chamfer-plane, which is a marked feature of the Perpendicular period, gives a flatness which is unpleasing to the eye in comparison with the rectangularly recessed grouping of the two preceding styles. Three peculiarities are so common in Perpendicular mouldings, that their absence almost forms the exception to general usage. These are:—

1. A wide shallow cavetto, or hollow, usually occupying the centre of the group, and equal to about one third of the entire width;

2. The constant use of bowtells, or beads, of three-quarters of a circle, resembling small shafts;

3. The frequency of the double ogee, and some varieties of it peculiar to the period.

The cavetto alluded to may perhaps be regarded as an elongation or extension of the Decorated three-quarter hollow, by which width is gained at the sacrifice of depth. It is generally a mark of early Perpendicular work when the cavetto is deep and narrow, of late when wide and shallow, and of debased when it is, as it were, so stretched as to become almost or quite a flat surface, sunken but little below the chamfer-plane, or external line of the group. The latter result may be observed in the windows of St. Botolph's church, and in those at the back of St. John's College, Cambridge.

Of many forms which the cavetto assumes, the most frequent are those represented in figs. 11, 16, Plate 9, and figs. 4. 10. 13, Plate 8. It is very common to find one or both ends of the hollow returned in a kind of quasi-bowtell, as seen in figs. 2 and 15, Plate 8. Frequently, however, perhaps generally, the ends

are sharp and angular, as fig. 14, Plate 9, or fig. 3, Plate 8. The three-quarter hollow often occurs in this style, and sometimes, as in fig. 2 Plate 9, in the same group with the great cavetto.

The bowtell will be observed in some form or other in almost every example given in Plates 8 and 9, and if the student compares the three plates of Decorated mouldings, he will perceive the importance of assigning this feature as a *peculiarity* of the Perpendicular. It is often formed from a plane by sinking a chamel on each side, as in figs. 1, 3, 6, Plate 8. Occasionally it stands like an excrescence on the surface of a plane, as fig. 5; but this is a departure from the usual practice, as well as from the true principle of mouldings.

The double ogee is much more common in Perpendicular than in Decorated mouldings. There is some difference, too, in the form which it assumes in the later style. For whereas the Decorated ogee, as we have stated before, always represents the profile of the half of a roll-and-fillet, the Perpendicular appears rather to be composed of a semicircular hollow continued in a bowtell; see figs. 4 and 5, Plate 16. However, the earlier form (fig. 5), is extremely common in Perpendicular mouldings, and especially in the double ogee. Other varieties, peculiar to the style, are the double ogee with a bowtell in the centre, fig. B, Pl. 9, an ogee combined with a quarter-circle, fig. C, an ogee with a small bead or fillet at the base, as figs. 7, 9, Plate 8, an ogee with a bowtell forming one side of the great cavetto, figs. 1, 8, 10, 16, 17, Plate 9, and the combination exhibited in fig. 15, where the depth of the hollow is generally conclusive. All these may be considered as distinctive criteria of the style.

The double-ogee is sometimes of large and clumsy size in Perpendicular arch-mouldings. In Decorated, it is usually rather small, and is principally confined to the onter members of doorways and windows. A roll-and-fillet between two ogees is properly a Decorated combination, as in fig. 14, Plate 2, fig. 3,

Plate 7. In 16, Pl. 8, the inner doorway of the south porch at Great Shelford, near Cambridge, it is of the Transition period, that is, before 1400.

The form of the roll-and-fillet, prevalent in this style, in which, however, it was not extensively used, is that between figs. 10 and 11, Plate 4. Fig. 21, Pl. 8. is also peculiar to the style; it is much used in basement mouldings and capitals. Sometimes we find the roll-and-triple-fillet in a debased form, as in fig. 13, Pl. 9, the belfry-arch at Haslingfield, Cambridgeshire. Two other corrupted varieties are exhibited in fig. 16.

Window-mouldings are usually extremely meagre, though the tracery is generally set deeper in the wall than in the preceding style, and, consequently, a larger space is available for the purpose. But the great cavetto encroaches so much upon the group that little room is left for more than a double-ogee on the outside of it, and the monial-members on the inside—by which term those mouldings of the jamb are meant which coincide with the monials. Fig. 10, Plate 8, represents the almost universal plan of Perpendicular windows. Sometimes, however, especially in earlier examples, we find the double-ogee externally, comprising the first order, and the monial-members occupying the next, without any cavetto in the angle. Figs. 12 and 18, Plate 9, are taken from different churches, and illustrate the remarkable uniformity which prevailed in the use of mouldings.

Having pointed out these facts (which we believe have not before been registered as essential and characteristic differences,) we have little to add on this part of our subject. Rich and good Perpendicular mouldings are not very common, most examples consisting but of three or four very ordinary members, which offer nothing either novel or interesting to the view; while in the two preceding styles there is ever something singular, or beautiful, or ingenious, in the treatment of the mouldings, which arrests our attention and adds to our store of knowledge. But Perpendicular doorways are often very deeply recessed, and the

engaged jamb-shafts bear isolated groups of considerable delicacy.

Fig. 1, Plate 8, is from the west doorway at Uffington, near Stamford; early in the style. Fig. 2 is the same, from the isolated tower at Dereham, Norfolk. Fig. 3 the same, from Saham Toney; fig. 4 from Fishtoft, Lincolnshire. Fig. 5 is from the east window at Leverton, in the same county; fig. 6 from Partney, fig. 7 from Louth, both doorways; fig. 8 from Stewton, a window-jamb; fig. 9 from an oriel window in Lincoln; fig. 12 from the south Choir Chapel, Lincoln Cathedral; fig. 10 the east window at Chesterton, near Cambridge; fig. 13 an arch in St. Sepulchre's Church; fig. 14 from a niche at Great Gransden, near St. Neots; fig. 15 the east window at Stapleford, near Cambridge; 16 from Great Shelford; fig. 17 a pier-arch from Holy Trinity, Colchester; fig. 18 the same from Long Melford, Suffolk; fig. 19 a doorway at St Martin's, Stamford. Fig. 20 the pier-arches of the same church. Fig. 21 from Louth.

Fig. 1, Plate 9, is from the east window of St. Martin's, Stamford. Fig. 2 the west doorway of the same. Fig. 3 the same from St. John's Church, Stamford. Fig. 4 from the Bede House in that town. Fig. 5 is from a pier-arch in the noble church of All Saints; fig. 6 the west doorway, and fig. 7 a window, from Histon, near Cambridge. Fig. 8 is the priest's door at Skirlaugh, Yorkshire.* Fig. 9 the north doorway at Harlton, near Cambridge. Fig. 10 the south doorway, Skirlaugh.* Fig. 11 from Basingstoke, Hampshire; Fig. 12 a window of common form. Fig. 13 the belfry arch at Haslingfield; fig. 14 the south doorway at Grantchester; fig. 15 a moulding of constant occurrence; fig. 16 from St. Albans; fig. 17 a door-

* These mouldings are borrowed from the "Churches of Yorkshire," and figs. 11 and 16, from Messrs. Brandon's excellent work, the "Analysis of Gothick Architecture." The author would particularly refer to the section of the Transition—Norman pier-arch, given in Part IX., as a peculiarly interesting example.

way, and fig. 18 a window, from Ryhall, Rutland. The former has large sculptured pateræ in the central cavetto.

It will be observed that the distinction of the *orders* is often completely lost in this style, while it is seldom undefinable in Decorated mouldings. It also appears from the examples given, that in many cases the chamfer-plane is either more or less than an angle of 45°; and that occasionally, as fig. 11, Pl. 8, two parallel planes are taken for the basis of the arrangement.

The cavetto is sometimes so extravagantly hollowed as to give the appearance, and probably the actual effect, of weakening the jamb. This is a great fault, and always produces a very unsatisfactory result to the eye, which desiderates the idea of perfect and substantial support.* An instance may be noticed in the west window of Grantchester Church.

SECTION VIII.

OF THE PLANS OF GOTHIC COLUMNS.

This subject falls properly under the head of Mouldings, since the forms of piers or columns more or less partake of the details of the arch-mouldings. But it is one of such extensive scope that only a few general rules can here be given for distinguishing the styles. And of these the bases and capitals will generally afford the surest indications.

A few sections have been given for the purpose in Plate 3.

The general plan of the columns which support the nave or other principal arches, is either square, circular, octagonal, diamond-shaped, or parallelogrammic; and these forms are either simple or complex.

* Willis's Architecture of the Middle Ages, p. 15.

Simple, when composed of one plain member, that is, not involving a number of parts;

Complex, when consisting of a core surrounded by smaller shafts, detached or engaged.

Norman piers are, in their earlier form, mostly masses of wall, with rectangular nooks containing detached shafts. The circular and octagonal seem to have been introduced about the time of the Transition; and these two forms are very common throughout the Early English and Decorated periods in ordinary parochial churches, where they are sometimes disposed alternately, or in opposite rows.

Complex Early English piers are often extremely beautiful; more so, perhaps, than those of any other style. They are so varied in arrangement that it would be impossible in this place to do more than notice their general characteristics, which consist principally in the number of smaller isolated shafts, clinging to a central column, to which they are at intervals attached, in reality as well as in appearance, by moulded bands or fillets. These shafts are generally of native marble,* or of some other kind of stone than the central pillar. The capitals and bases are often conjoined, being worked out in one large piece.

A circular column, surrounded by eight smaller detached shafts, as at Ely, is a beautiful and common device. Fig. 11, Plate 3, is of this kind, but the shafts are engaged, though undercut. It forms an exquisitely graceful feature in the Chapter-house of Furness Abbey. The lower part of a similar one, rather later in date, still stands in the vestibule of St. Mary's Abbey,† York; and there is a very good example at Exton, Rutland. Fig. 8 is from All Saints, Stamford; fig. 13 from Ruskington, Lincolnshire; and fig. 12 from St. Peter Gowt's,

* It is a curious fact that the medieval English architects appear *never* to have used any foreign marbles, in construction at least.

† A place laid out in very questionable taste after the most approved fashion of a London tea-garden, and profaned by a ridiculous temple, encroaching upon the hallowed site.

at Lincoln. Fig. 17 is from Skelton, near York; and this is a very common form of Early English and Decorated piers, with some varieties, as fig. 16, Pl. 3, figs. 14, 15, Pl. 5. Half of a roll-and-fillet set on each side of a square, the corners of which project, and are sometimes worked into smaller pointed beads, is of constant occurrence. The square being set to the cardinal points, the addition of the shafts changes the outline to the diamond form. The fillets running up the face of each shaft usually pass over or round the astragal, and die into the bell of the capital, as in fig. 40, Plate 10.

Decorated piers always have their shafts engaged, so that a clustered column is in reality formed by working out the surfaces of the mass in lines and hollows of graceful lights and shadows. Figs. 14 and 16, Pl. 3, are among the commonest forms; but the richness and extent of the great piers in Cathedrals and Abbeys, it would require a volume to set forth. Fig. 14 is from Utterby, Lincolnshire, and is remarkable for the hollow faces, which are seldom found but in small shafts in Perpendicular work.

Perpendicular piers are generally of oblong or parallelogrammic plan, the longitudinal direction extending from north to south. On the east and west sides half-shafts are attached, which bear the innermost order, or soffit-mouldings, of the arch, the rest, including the great cavetto, being usually continuous, without the interruption of any impost. Very good examples exist at Great St. Mary's, Cambridge, where vaulting-shafts are also added on the northern and southern faces. Fig. 15 is from Attleborough, Norfolk, of late Decorated date. Fig. 18 from St John's, Stamford, a plain but good illustration of this almost universal method.

Another form, however, occurs not unfrequently in Perpendicular columns, which is shewn in figs. 19 and 20, the first from St. Martin's, the second from St. Mary's, Stamford. In these the ground-plan is a square, set diamond-wise, and each

face (as in fig. 19), or each angle (as fig. 20), carries an engaged shaft. In the first case, the angles are chamfered away, in the second, a hollow is sunk in the face between the shafts. This is usually of later date than the parallelogrammic plan.

SECTION IX.

OF CAPITALS.

The mouldings of capitals and bases form not the least interesting, extensive, and important part of the study. And they have the peculiar advantage of being more definitely marked, in the various periods of architecture, than any other kind of mouldings. It is by no means impossible, even for an experienced eye, to mistake the details of a Decorated for those of a Perpendicular archway: but no one moderately acquainted with the subject could hesitate in pronouncing the style of a capital or base, provided it possessed any character at all.

To go very rapidly through the history of a column, we may state that an upright post planted in the earth was found to sink, or decline from the perpendicular, by a great superincumbent pressure. This failure suggested the necessity of a plinth, or broad footing of masonry, on which it might stand firm, erect, and immoveable. This arrangement we may often observe in the construction of wooden sheds or rustic homesteads of rude timber-work. Again, a great square stone would naturally be placed on the top of the pillar or post, as the bed or cushion to receive the superstructure, whether arch or entablature. It was from such an origin that the highly elaborated Gothic base and capital arose.

Examples fully as rude as this do actually exist in English Ecclesiastical Architecture, so that we have positive fact to guide

us instead of mere theory. The Ante-Norman belfry arches at Barnack and St. Mary Bishophill Junior, York, with a great many others of probably much later date, have square pillars on each side resting upon, and surmounted by, rude and shapeless blocks of stone.

In the Norman period, when the shaft was round, the highest and lowest members only, respectively called the *abacus* and the *plinth*, were square, the parts immediately below the one and above the other being rounded off to suit the shape of the shaft. How this was done in Norman capitals is shewn in fig. 2, Plate 10, and it is seen in the ordinary form of what has been called the *cushion capital*. We may observe the lingering reluctance to get rid of the square plinth, in the tongue-shaped leaves or other grotesque excrescences which are often seen to issue from the circular mouldings of Transition-Norman bases, and extend to the otherwise vacant and superfluous angles of the plinth. It was felt that these angles were obtrusive, but they preferred to decorate what as yet they hardly dared to cut away.

But the simple square was sure to undergo some changes. And this took place first in capitals. In the more elaborate Classic styles, the sides were cut out, or curved inwards,—a feature sometimes seen in Perpendicular octagonal capitals: but this method of relieving and lightening the massive impost does not seem to have occurred to the Romanesque builders. They either cut off or cut out the corners, as soon as the pier-arch, by becoming recessed, or involving a sub-arch, (fig. 4, Pl. 1,) left a portion of the bearing surface unemployed and superfluous. From the former process came the octagonal form; and, either by removing angles indefinitely, or, more probably, by adopting the shape of the shaft, we obtain the circular capitals and base of the first and second Gothic periods. But capitals became octagonal before plinths; and similarly octagonal plinths were retained long after circular capitals had become universal.

Gothic capitals may be divided into two kinds, moulded and

floriated. The upper member, or abacus, is common to both, and is the relict of the rude impost which first surmounted the stone post, from which it was transferred through the medium of the Classic to the Christian styles. This seems, in fact, to be the primary and essential, and, as it were, *practical* member, the others being only decorative adjuncts. The lowest member, called the neck, or astragal, is also common to both kinds; but in floriated capitals foliage covers the intermediate space, which is otherwise occupied by the overhanging and inverent member called the *bell*, with its accompanying mouldings. In the Transition-Norman and Early English, the foliage, as is well known, is arranged vertically; in the Decorated it twines horizontally, or rather transversely, round the capital. In Perpendicular, floriated capitals are rare; more frequently small leaves, or *pateræ*, are set like studs at intervals round the shaft above the neck, as in Great St. Mary's Church, Cambridge.

The dog-tooth, the nail-head, and other ornamental mouldings, sometimes occur in capitals. Occasionally (in Norman work commonly) some subject is grotesquely sculptured below the abacus. Of this there is a very curious example at West Keal, Lincolnshire.* Or a subject is intermixed with the foliage, as in some very interesting Early English capitals in the south transept and the north porch of Wells Cathedral.

But of floriated or sculptured work it is not at present our province to speak. It is enough to observe that the origin of foliage is probably classical, since, in the Romanesque, we find the style of it, as used in capitals, very closely approaching the Corinthian acanthus, or the Ionic volute: for example, the Transitional Norman capitals at the east end of Canterbury Cathedral, and not unfrequently in parochial churches, (as at Barnack,) seem clearly to be classical in general features, and almost

* On one of the capitals (which are Decorated) a fox is carrying off a goose, while a chained ape is laying hold of it behind. The Decorated capitals in Oakham Church exhibit the same design, among others.

so in their details. Others, however, will have it that the origin of the foliated capitals is rather from the East. There can be little doubt that the influence of both prevailed in the introduction of foliage into Gothic capitals, from whence it was subsequently transferred to other parts of buildings.

The *use* of capitals, in pure Gothic architecture, to speak constructively, is to receive the clusters of arch-mouldings which are stopped by it at the summit of the column, and not continued down to the ground. For, when the arch-mouldings are not wholly identical with those of the jamb or column, they must either die away at the spring, (in which case they are called *discontinuous*,) or be abruptly stopped by a projecting impost. In many cases part of the mouldings are continuous, and part stopped by the capitals; certain groups being borne by shafts,* while the intervening hollows are continued to the ground, forming at the same time deep lines of division between the groups of arch-mouldings above, and the separate jamb-shafts below. This is particularly the case in Perpendicular piers and arches, as described in Section VII. Here the soffit, or innermost, mouldings are borne by a shaft, the outer being continuous; while in Early English doorways the soffit is generally continuous, the others carried by shafts, as in figs. 18 and 19, Plate 2. Again, in Norman and Early English, the shafts stand isolated; in the latter, so far that the hand, or even the arm, may be passed round them; in Decorated, they are engaged, fewer in number, less prominent, less important to the apparent work of support. And in Perpendicular they become entirely subordinate, and merely decorative, as may be observed in the porches and doorways of King's College Chapel. Hence, by an ulterior debasement, mere bowtells, as we before remarked, are furnished with quasi-capitals and bases.

* By what is called *decorative*, i. e. apparent construction. The mouldings would in reality remain in their places as well without as with the bearing shafts. Willis's Architecture, chap. II.

The mouldings of pier-arches became entirely continuous only in very late work; and the reason is, that the idea of a capital or impost is essential to that of an isolated column; while in the jambs of doorways, and entrance arches, the shafts themselves, and therefore the impost, may be omitted or added at will, as a mere matter of decoration.

A good Gothic capital is a feature of exquisite beauty. Take for example, those of the piers in the nave of Trumpington church, fig. 11, Plate 12. Small in projection, complex and graceful in their members, yet entirely subordinate to both arch and pier, they seem to bind into one the bundles of shafts which form the column, while, by their reversed or horizontal outlines, they intercept and at the same time form a satisfactory termination to the vertical lines above and below.

Gothic capitals, then, consist of three parts; the abacus, the bell, and the neck. And these parts are distinctly visible in block capitals, or those in which the members have not been worked out. Such may occasionally be met with in village churches.

Fig. 1, Plate 10, shews the two uppermost members in their rudest state. Fig. 3 is from Laceby, Lincolnshire; fig. 4 from Middle Rasen, and fig. 5 from Walesby, both in the same county. Here A is the abacus, B the bell, C the neck, marked by dotted lines. It will be observed that Gothic capitals may generally be reduced to this outline, as fig. 16, from Great Abington, Cambridgeshire.

The most certain evidence of date is furnished by the mouldings of the abacus. In Early English capitals it is almost invariably undercut, or hollowed out, so that it seems to overhang the bell just as the bell does the shaft, and with the same profile, consisting of the half of a roll-and-fillet. The Decorated abacus consists of the scroll-moulding, with a cylindrical roll of rather less size below it. Figs. 38 and 39, Plate 10, represent these peculiarities, and an examination of the sections of capitals

of both styles will shew how rarely this distinctive mark is wanting. In Early English capitals the abacus is sometimes quite plain, as fig. 17 from Thurlby, and fig. 8 from Frieston Lincolnshire. In the reign of Edward I. a peculiar moulding occurs, something between the two, which may be called an undercut scroll-moulding. This is seen in fig. 9, from Stickney, and 12, from Lincoln Cathedral, and it may be considered a characteristic of transition from Early English to Decorated.

In Early English capitals the bell is sometimes double, which gives a very handsome effect. This is seen in figs. 19, 28, from Tinterne, 22, from Furness, 24, from Bolton, Abbeys.

Capitals occur in their greatest perfection in shafts. The larger piers, of octagonal or circular form, are seldom so elaborate or so decidedly marked. In these the abacus is the only member which affords any sure indication of date.*

The distinguishing feature of Decorated capitals we have stated to be the scroll-moulding of the abacus. And in perhaps ninety in every hundred examples the rule holds good. Yet some Early English capitals present the same feature, as those in the triforia of Jesus' College Chapel, Cambridge. It is believed that the Early English abacus scarcely ever occurs in pure Decorated work.

The bell is seldom so prominent or so deeply undercut in this as in the preceding style. It is also much more varied by elaborate and capricious forms, as by a number of fine edge-lines; and often the under part of the bell is composed of an entire roll-and-fillet, as in figs. 3, 8, Plate 12, and 12, 20, Plate 11. It is still more frequently formed by the compound member shewn in fig. 4, Plate 11. Out of forty-three examples of Decorated capitals given in Plates 11 and 12, ten of them have the bell thus formed; and others present some slight variety of it.

* It is by no means improbable that the smaller capitals and bases were turned in lathes. The author is assured by an eminent architect that he has found small holes in the centre of each end which seemed to have been made by turning. Shafts were inserted by a socket into their bases, and secured with lead.

It is seen in elevation in fig. 15, Pl. 12, the beautiful capital of the nave-piers at Hingham.

Decorated capitals very seldom have the double bell; at least we are unable to give more than two examples, fig. 2, Plate 11, from Yaxley, Hunts., very early in the style, as appears by the abacus, and fig. 9, Plate 12.

The neck, or astragal, forms an important detail in determining the dates of capitals. In the Early English it is usually a heavy and bold annular moulding, of a stilted or oval shape, or rather more than half a circle, as fig. 11, Plate 10. Either this or the semi-hexagon (fig. 15) is the prevailing form. The Decorated neck is almost always the scroll-moulding: but both the Early English forms, with many others, will be found to occur. The capitals of both styles are completely identical in general character and principles of formation, and differ only in minute details. A practised eye may now and then be deceived in their date. And it is here important to remark, that though the vast majority of capitals will be found to fall in with the rules laid down in this work, anomalies will often occur which defy any attempt to classify them; and the same is true of bases.

Perpendicular capitals present very marked features, which are seldom liable to be mistaken. The mouldings are large, angular, meagre, and few. Neither abacus nor bell is clearly defined,—a fact similar to that already stated with regard to arch-mouldings, that the distinction of *orders* is generally lost. The abacus, in short, no longer appears as a separable member, and the bell either wholly vanishes, or is very imperfectly developed. The upper part of the abacus is usually sloped off to a sharp edge, like the chamfer of an angle; the section of the moulding below resembles the letter S inverted, (fig. 4, Pl. 16,) and, above all, the capital is *octagonal*, while that of the preceding styles is round. The shaft, however, is circular in Perpendicular work; while octagonal capitals only occur in the other

styles in the case of large single columns of the same shape, if we except a very few cases of Early English detached shafts with octagonal capitals, as in the transepts at Histon, near Cambridge, and the west front of Peterborough Cathedral.

The same principle which induced the later architects to prefer sharp edges and abrupt lines in their mouldings, to the soft and blending Decorated forms, made them revert to the octagonal capital to the rejection of the circular. The base, however, is generally circular in its upper members, and octagonal below, as in figs. 1 and 2, Plate 15.

Perpendicular capitals are often embattled, as figs. 16, 22, 26, 29, Plate 12, an arrangement which is rare in the preceding style.

The astragal, or neck, is either a plain round, or a kind of debased scroll-moulding with the upper edge chamfered as in the abacus. Another form common to both members is that shewn in fig. 21, Plate 8, which occurs in the abacus of fig. 8, Plate 13, and the neck of fig. 15.

The bell with its overhanging and undercut mouldings having vanished, the projection of the capital is produced by a meagre slope, as figs. 3 and 5. Sometimes, however, but not very often, the bell remains. Its form seems capricious, and reducible to no certain rule. Indeed much greater licence was taken in general in designing the mouldings of this style than in any other.

The section of the Perpendicular abacus is a mere corruption of the Decorated scroll-moulding. Thus, in figs. 7, 10, and 12, Plate 13, we see nearly the same form as in the Decorated; and by omitting the under roll, as in figs. 20, 21, we obtain the ordinary profile of fig. 15. This debasement of the scroll-moulding is separately shewn in fig. 22, Plate 4.

It will not be necessary to occupy much space in stating the places from which our numerous sections of capitals and bases are taken. A few only of the most remarkable shall be thus specified. Figs. 7, 8, Plate 10, are from Frieston, Lincolnshire.

Here the bell is of rather unusual form, perhaps more so in this than in the next style, as in figs. 9, 11, 15, 16, 17, Plate 11. Fig. 9 (Pl. 10) is a noble capital from Stickney, Lincolnshire, late in the style, as appears from the undercut scroll-abacus. Fig. 10 is from the same place. Of the same date and character are 12 and 13, the former from Lincoln Cathedral, the latter from Ruskington. 18 is from the Chapter House of Furness Abbey, and has the double bell. 19 from Tinterne Abbey, very rich and fine in its profile. 22 is shewn in elevation, by studying which those who are unacquainted with the details of the styles may form a correct idea of the leading characteristics of the capitals of this period. It is from Furness Abbey. Figs. 23, 24, 26, are from Bolton Abbey. 28 is from Tinterne, rather late, and remarkable in its profile. 29 is from Arreton, Isle of Wight. 30 from Saffron Walden, of much larger size than usual. 37 is from Bolton Abbey, with the nail-head in the hollow above the bell. 40 is the elevation of the most ordinary form in shafts and clustered piers.

Figs. 1 and 2, Plate 11, are from Yaxley; fig. 4 is a fine capital of remarkable size and depth, in a chapel used as the Vestry in the Church at Boston. Fig. 3 is from Fletton Hunts; figs. 6, 7, from Leverton; fig. 9 from Sibsey; fig. 10 from Stickford; fig. 11 from Partney, all in Lincolnshire. Fig. 12 is from Legburn, in the same county, of unusual form and size (15 inches in depth); fig. 13 from Waltham. Figs. 15, 16, 17, are all from Lincolnshire, and almost identical. This is the form of the pier-capitals at Heckington. Fig. 18 is from Aswardby, Lincolnshire, depth one foot; fig. 22 is from Abington, Cambridgeshire.

The sections of Decorated capitals, in Plate 12, are mostly from churches in the neighbourhood of Cambridge. Fig. 14 is not uncommon in Transition to Perpendicular. This capital occurs at Maxey, Northamptonshire, and at Louth. (See fig. 28, Plate 11.) Fig. 13 is from a fine monument at Little Shelford, near Cambridge. The rest of the sections in this Plate are Perpendicular.

Fig. 16, Plate 12, is from Careby, Lincolnshire. This has a battlement above, and the double ogee below the abacus.

Fig. 19 is from Uffington, near Stamford. This and the next illustrate the methods of obtaining the *plane* of the mouldings, which in this style should be attended to. Figs. 22, 23, 24, are from St. Martin's, figs. 26 and 27 from St. John's, fig. 28 from St. George's, and fig. 29 from the Bede House, all in Stamford.

Fig. 1, Plate 13, is from Long Melford, Suffolk; fig. 4 from Louth; figs. 8, 9, 12, from Colchester; fig. 14 from Harston, near Cambridge; fig. 13 from Fen Ditton; fig. 17 from Mattishall, Norfolk. Here the abacus is octagonal, the bell and neck circular. Fig. 18 is from Elsworth* Hall, Norfolk; fig. 16 from Dry Drayton, near Cambridge; fig. 19 from Saham Toney.

SECTION X.

OF BASES.

The earliest examples of bases must be looked for in the rude monolith blocks which support the pillars or pilasters in the Ante-Norman Churches, such as at Wittering, near Stamford, and others already mentioned. These are often mere shapeless lumps, laid down as they were raised from the quarry, and consisting only of the single member thus presented to view. Norman architecture first adopted a more regular method in constructing the footing of a column, and from that arrangement those of the subsequent styles are readily deduced. The classic pillar was evidently the prototype of all these.

Bases consist, in early work, of at least two distinct mem-

* An interesting specimen, very little known, of a moated mansion of the time of Henry VI. or VII.

bers; the *plinth*, or lower step, of solid masonry, generally square, but in Early English often octagonal; and the *base-mouldings*, a series of annular rolls, slopes, or hollows, taking the form of the column, and forming an ornamental junction between the shaft and the more essential or constructive member, the plinth. In Decorated and Perpendicular columns, the plinth is usually entirely omitted, and the base is divided into heights, stages, or *tables*, by gradually spreading courses, each separated from the next by a plain or moulded order.

Of Norman bases it is not necessary to treat at length. The varieties of form are not numerous; and as they do not involve complex mouldings, like the after styles, it will be sufficient to direct the attention of the student to the upper members, in which the character of a base may be said principally to consist. In shafts, the base often resembles the capital inverted; in some instances, the one might be substituted for the other with scarcely any perceptible change of appearance. Often a bold annular roll, quirked on the under side, (as seen in figs. 3—7, Pl. 14,) divides the shaft from the plinth. A very common form is shewn in fig. 8, from the nave of Peterborough Cathedral. This occurs in St. Sepulchre's church, where the present bases were cut from a very small piece, only a few inches wide, which alone remained in the eight massive columns of the circular part.

A little before the Transition period, a modification (often with very trifling departure from the Classic) of the Attic base was introduced, from which the Early English is directly derived. The Attic base is given in figs. 1 and 2. It consists of two rounds with an intervening hollow, separated from them by fillets. If we compare this form with some of the Early Italian-Gothick bases, figs. 3, 4,* and with one from Canterbury Cathedral, (date about 1180,) fig. 5, we shall find them rather identical with, than similar to, the Classic. The uppermost fillet, or first member at the lower extremity of the shaft, was,

* From Willis's Architecture of the Middle Ages.

however, omitted in most, if not in all cases; and the form in fig. 7, from Peterborough Cathedral, was very much in vogue. This example leads us at once to the ordinary Early English base, (fig. 12,) the chief peculiarity of which consists in the intermediate hollow being cut *downwards* rather than *sideways*, and extended from half to three-quarters of a circle, so that it is capable of containing water, which may often be observed standing in exterior bases. The filleted rolls on each side, above and below the hollow, are naturally formed by cutting off the feather edges seen in fig. 3. A valuable example of the Transition base is fig. 6, taken from the great central piers of Byland Abbey, shortly after some extensive excavations had revealed a great part of the ground-plan and lower portions of the columns of that once splendid church. Here we most distinctly recognise the peculiar feature of the Attic vase, the *side-hollow* of fig. 1,—the lateral semicircle in place of the descending three-quarter circle. The earlier the base is in the Early English period, the shallower, as a general rule, is this water-holding hollow.

There are two kinds of Early English bases. The first, and by far the most common, is the form given in fig. 12; the other seems to be derived either from omitting the hollow altogether, as in figs. 10, 11, and thus bringing the rolls into contact, or from supplying its place by another similar roll, as fig. 15, or even by an interposed square edge, or *plinthiform* member, as fig. 9, the bases of the choir columns in Rievaulx Abbey. Generally, this intermediate roll is rather smaller, and often a little depressed inwardly, as fig. 16, from Ely. Hence was at once derived the ordinary Decorated base.

In very rich Early English bases there are often double hollows between filleted rolls—after the analogy of the double bell in capitals. And below these, at some distance, occur other series of very bold annular rolls, single, double, or even triple. Fig. 18 is the base of a great pier in Lincoln Cathedral. Fig. 26 from the beautiful Galilee at Ely, where the bases are

worked out of hard Purbeck marble, and have all been elaborately polished. Fig. 27 is from Skelton, near York.

Sometimes the fillet is omitted in the upper roll, as fig. 25. In fig. 20, the hollow again approaches that of the Attic base. Fig. 18. from Lincoln Cathedral, is a fine piece of detail, of great richness and considerable spread. Fig. 30, from Furness Abbey, is remarkable for the omission of the hollow in the upper member. The examples given in elevation, figs. 29 and 28, the former from Furness, the latter* from Tinterne Abbey, will convey a correct idea of the general appearance. The spread of the base in the uppermost members generally equals that of the capital, or nearly so.

There is something extremely elegant in the form of this, the more usual, kind of Early English base; and it is, moreover, surprising to notice the uniformity which everywhere prevails both in it and the capital of this period. The plainer form (figs. 10, 11, 15, 16, 17, 21) may possibly have gradually superseded the more elaborate, either from the difficult and complex work of the latter, or because the hollow was externally apt to be filled up with standing water, moss, or earth, and internally with dust and dirt, as it will almost invariably be found to be. Probably the desire of forming a better weathering had much influence in the change.

In Early English bases it is also to be remarked that the large spreading roll, which forms the lower of the two members between which the deep hollow is placed, is worked out of the block, with which it usually stands *flush*, or in the same plane, by a quirk or angular nook. This is almost invariable; and it is mentioned particularly with reference to Decorated bases, where a marked difference in this part is observable. Here we usually find either the scroll-moulding (fig. 35, from Coton, near Cambridge) or a flat under-edge, as fig. 42, from the nave-piers at

* The engraving is slightly incorrect, from the shaft not standing true in the centre.

Trumpington, or the part of the base below it cut away, so that it overhangs clear, as fig. 40, the base of the beautiful central column in the chapter-house at Wells; fig. 39, from the doorway in the same place; fig. 37, from St. Mary's Abbey, York. Fig. 45 from Fishtoft, Lincolnshire.

By far the commonest Decorated base is that shewn in fig. 35; the number of rolls being generally three, but often only two, as fig. 34. In fig. 39 there are four; but the uppermost is of lead, by which the shaft is fastened. Not a few modifications of this form occur; but they are seldom very complex. Fig. 43 represents the nave-piers at Bottisham, near Cambridge; fig. 38 is from the arcade in the Ladye Chapel at Ely, worked in Purbeck marble. Here the lower member is the roll-and-fillet, which is not uncommon. It is partially developed in fig. 41, from Over and Histon; an example which retains a singular trace in its upper member of the side hollow of the Attic base. Fig. 3, Plate 15, is of unusual profile; it is from the chancel at Over, Transition to Perpendicular. Fig. 33, Plate 14, is from the nave-piers at Tinterne—already noticed as a specimen of the inverted scroll-moulding. Fig. 44 is from Boston. This form is not unusual late in the style.

Decorated bases are often stilted, or raised above the floor, without any plinth, (except in great clustered columns,) but by graduated stages or tables, as before described. This principle was carried to an extravagant excess in the next style; in some instances, as those under the western tower at Ely, the uppermost member stands six or even eight feet from the ground. The lower part of Decorated bases is sometimes octagonal, or polygonal, as in the columns which support the octagon at Ely; and sometimes these faces are fluted or hollow-chamfered.

Instead of the three half-rounds which ordinarily constitute the Decorated base, one member, generally the second, but often the first, is sometimes, as it were, scooped out in the middle, in what might be called the inverted wave-moulding, so as to form an

ogee curvature. This is seen in figs. 36, (from the Ladye Chapel, Ely,) 40 and 42. Hence the bell-shaped base of the next style (figs. 1 and 2, Plate 15) was immediately derived. So similar, indeed, are the two forms, that some pure Decorated bases may occasionally be found which would have been equally correct in a Perpendicular column. Professor Willis considers this peculiar feature as a corruption of the Attic base, caused by the omission of the fillets of the two rolls, and the partial development of the hollow. And this seems to be a very reasonable account. It does not appear to occur in early, or geometric Decorated.

But few examples of Decorated bases have been given, because any important varieties from the forms described are not of sufficiently frequent occurrence to render it necessary to illustrate them. They are very chaste and elegant in profile; often standing but a little above the floor-line, especially in shafts, and of modest and unpretending contour. They are for the most part of decided character; and where any difficulty occurs in determining their date, an inspection of the capital, according to the rules already laid down, will readily remove it.

The bases of Perpendicular columns are very various; but the prevailing characteristic is a large bell-shaped spread in the upper part, often double, forming the contour of a double ogee in section. Figs. 1 and 2, Plate 15, are from Crosby Hall, and give a correct representation of the most ordinary kind. It will be particularly observed that the lower part is almost invariably octagonal, the upper being generally round, but also frequently octagonal, irrespective of the shape of the shaft. From the great size and height of the best examples they are not so easily engraved in a small space: Plate 15, however, contains enough specimens to guide the student under ordinary circumstances. Fig. 5 is from Louth; fig. 13 from All Saints, Stamford; fig. 17 from Haslingfield; fig. 18 from Holy Trinity, Colchester; fig. 20 from St. Edward's, Cambridge. Fig. 21 from Herne, Kent.

Almost every Perpendicular base has either one or more stages, sloping off by a hollow chamfer, as figs. 15, 16, 17, or by a second bell-shaped slope, as figs. 5, 6, 14. The ancient name for the lower member was the *grass-table*,* especially when applied to basement mouldings. All Perpendicular bases have an annular roll, resembling the neck of capitals, for the first member of the base. This is often the debased roll-and-fillet shewn in fig. 21, Plate 8, as in fig. 15, or the debased scroll-moulding, as in fig. 18.

It is singular that edge-lines occur less in Perpendicular than in any other bases, almost every point being carefully rounded off. There is a peculiar nakedness in the straight unbroken line of the lower, or *grass-table*, rising, as it does, abruptly from the floor to the height of one or two feet, as in the interior of King's College Chapel; but the bell is of remarkably graceful form; and perhaps few will prefer the contour of fig. 29 or 32, Plate 14, to that of figs. 1 and 2, Plate 15.

Fig. 4 is from the Lady Chapel, Peterborough; fig. 6 from Carbrook; fig. 7 from Saham; fig. 8 from Dereham, fig. 9 from Norwich Cathedral; fig. 10 from Mattishall; fig. 11 from Swanton Morley, all in Norfolk; figs. 12, 15, from Colchester; fig. 14 from St. John's, Stamford; fig. 16 from St. Alban's; fig. 22 from Saffron Walden.

SECTION XI.

OF HOOD-MOULDINGS AND STRING-COURSES.

This is by no means an unimportant branch of the study of Gothic Mouldings, the varieties and peculiar characteristics of

* See Willis's Architectural Nomenclature.

the styles being as well defined in such details as in any hitherto described. Of the immense diversity of forms we can only enumerate some of the most ordinary; for capricious irregularities constantly occur, which, as they seem reducible to no certain rule, hardly claim a place in laying down the principles of a system. Yet, though the *form* may be arbitrary, the *character* is generally maintained.

Plate 16 contains a series of mouldings of this sort, (for hood-mouldings and string-courses must be classed together, being in fact very often identical, or the one continued from the other,) divided into three parts illustrating the three styles.

We have before observed that string-courses may be regarded as the vestiges of the horizontal lines by which Classical is principally distinguished from Gothic architecture. These strings consist of projecting ledges of stone, carried below windows, both within and without, round buttresses and other angular projections; and in cornices, parapets, tower-stages, and other parts of edifices, used as dividing lines to set off one particular portion as distinct from another. Though subordinate, and seemingly insignificant details, they are of the greatest possible importance in imparting a character to a building. Sometimes rising abruptly in graduated and rectangular heights; sometimes carried over a doorway or round an arch; now dying into the wall, now, as it were, passing into some interrupting projection, and, nothing baffled by it, reappearing on the other side; now starting aloof into a window label, and playing the most fantastic tricks before it again descends; a string-course at once relieves naked masonry, and binds into a whole the seemingly detached portions of a rambling and irregular construction. In most cases, especially in windows, it forms a real drip, or weathering, and of course adapts its upper surface especially to this end. Hood-mouldings, when used *internally*, cannot be said to have any real use: but they form a decorative finish of too important a kind to be neglected with impunity.

Norman string-courses are generally of uncouth and awkward profile—full of edges or hard chamfered surfaces. In most cases they are adorned with some sculptured decoration of the style, as the billet, the chevron, the hatched or serrated moulding, and the like. The plain half hexagon, or square bead with chamfered angles, is one of the commonest forms. Two or three only are given in Plate 16, as specimens of the kind, viz. figs. 6, 7, 8, and 9. The latter is from the chancel-arch at St. Giles's, Cambridge, erected before the year 1100. The upper edge is often left square, instead of being weathered off; and the wide but shallow form presents a heavy and clumsy appearance, especially as it is not relieved by the dark shadows caused by undercutting the lower surface.

The commonest Early English strings are those given in figs. 13, 15, 18, 22, 25. Figs. 10 and 12 may also very often be found. But the undercutting is the most striking characteristic of this, as of all other mouldings of the style. Fig. 11 is from Furness Abbey; fig. 17 from Tinterne; fig. 19 from Rievaulx; fig. 21 from Byland. The latter is curious from its late form, (see fig. 71,) though the date is about 1200. The same remark applies to fig. 20, from Furness, in which even the characteristic Perpendicular ogee of fig. 4 occurs. Fig. 23 is from Lincoln Minster. It is peculiarly elegant, and of frequent occurrence. Fig. 24 is from All Saints, Stamford. Fig. 25 has the scroll-moulding; fig. 26 the roll-and-fillet complete. Both are equally common in Decorated work. Fig. 28 generally marks the time of the First and Second Edwards.

The most frequent Decorated form is perhaps fig. 35 or 48. Figs. 44, 49, 53, are also very common. The scroll-moulding with a half-round next below it, the same as in the abacus of capitals of this period, is very characteristic, as fig. 36. Fig. 41 is generally found in Transition to Perpendicular. Fig. 43 is from the vestibule of the Chapter House at Wells, early in the style. Fig. 50 is from Over, near Cambridge; fig. 45 from Bottisham.

The rounded form of the upper side, or weathering, is characteristic of the two first styles; the angular or chamfered of the last. In this respect also string-courses follow the principle of the abacus of capitals.* Figs. 52 and 55 may therefore be pronounced late in the style. Undercuttings, it has already been remarked, occur principally in the time of Edward I. and II., as figs. 32, 44, 51.

Perpendicular strings and hood-mouldings are generally marked by the plane sloping side of the upper surface, as figs. 60, 61. The details of the parts underneath are so varied as to render it almost impossible to give anything like a complete account of them: yet, numerous as they are, they will generally be found to recur with tolerable uniformity. Usually there is a small bowtell in the lowest part, as in figs. 57, 59, 62, 64, 68, 71, and others, more or less clearly developed. This is rather a characteristic mark of the style. Perhaps the most ordinary forms are figs. 61, 68, 71. The double ogee, as fig. 60, and the combination of the ogee with the under fillet, already described, as in figs. 56, 77, often occur. Fig. 78 exhibits the peculiar Perpendicular form already pointed out. A semi-circle sunk in the under side of half a square projecting diagonally, as in fig. 66, is also a common variety.

In copying string-courses, it is better to draw the parts of the wall above and below, perpendicularly on the paper, not only for a guide to shew the direction of inclination or projection, which, without this, is left quite indefinite, but also because the wall often recedes above the string, or even overhangs, as fig. 56. The angle of the chamfers can best be attained by bending a piece of lead across them. Sometimes a foot-rule may be bent against the wall and the under part, as fig. 67, and thus the exact angle can readily be transferred to paper.

Much more might, and indeed ought, to be said on the subject

* Early English strings are often continued from the abaci of capitals, which perhaps accounts for this fact.

of mouldings, were it the intention of the writer to attempt anything like a *complete* essay. For example, there yet remain wholly unnoticed several important cases of the application of mouldings in Gothic architecture. Basements, weatherings of buttresses, cappings of parapets and battlements, plans of mullions, groin-ribs, timbers of roofs, and other wood-work; besides the many and interesting varieties of ornamental or floriated mouldings, are all well-deserving of the closest attention. But *a great book is a great evil*, as a philosopher of old has declared; and it has been the wish of the author rather to win the attention of the reader to a most curious and satisfactory study, by pointing out the way to copy and observe, than to deter him by the uninviting form of a grave and heavy book. Quite enough has been said, it is conceived, to illustrate the really essential principles of the science. And no one need feel any difficulty or perplexity in recognising the details of the styles, who will take the trouble to apply the rules laid down in this little work.

At present, the subject of mouldings is very little understood by amateur ecclesiologists, apparently from the want of some treatise shewing them how and where to *begin*. For this is the real point of perplexity in every new and strange study: we are quite at a loss what to observe first, and what course to pursue in our investigations. It is just as when (*parvis componere magna*) the uninformed eye looks up to the crowded stars of the sky, and wonders how the first step was gained in the science of astronomy.

THE END.

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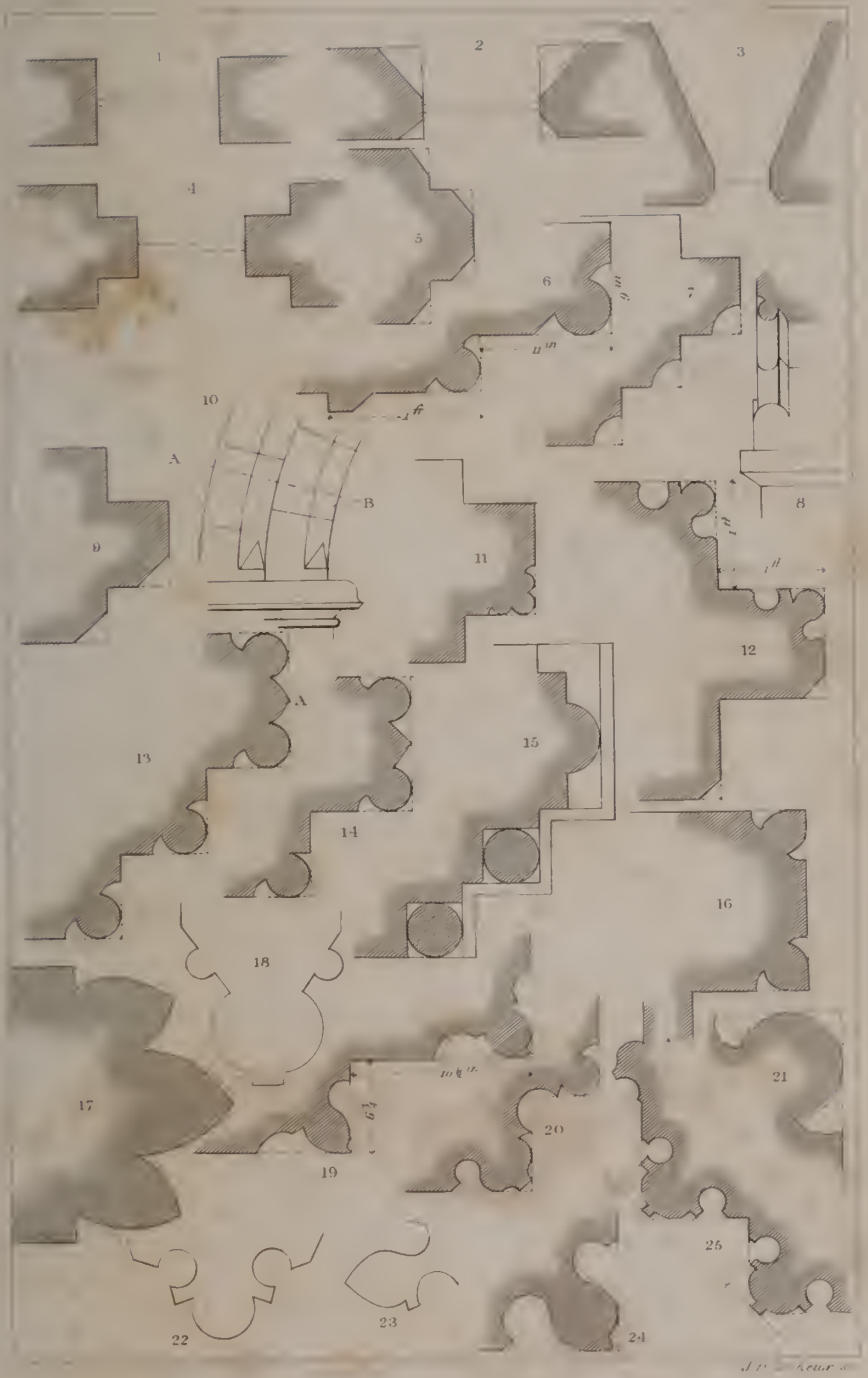
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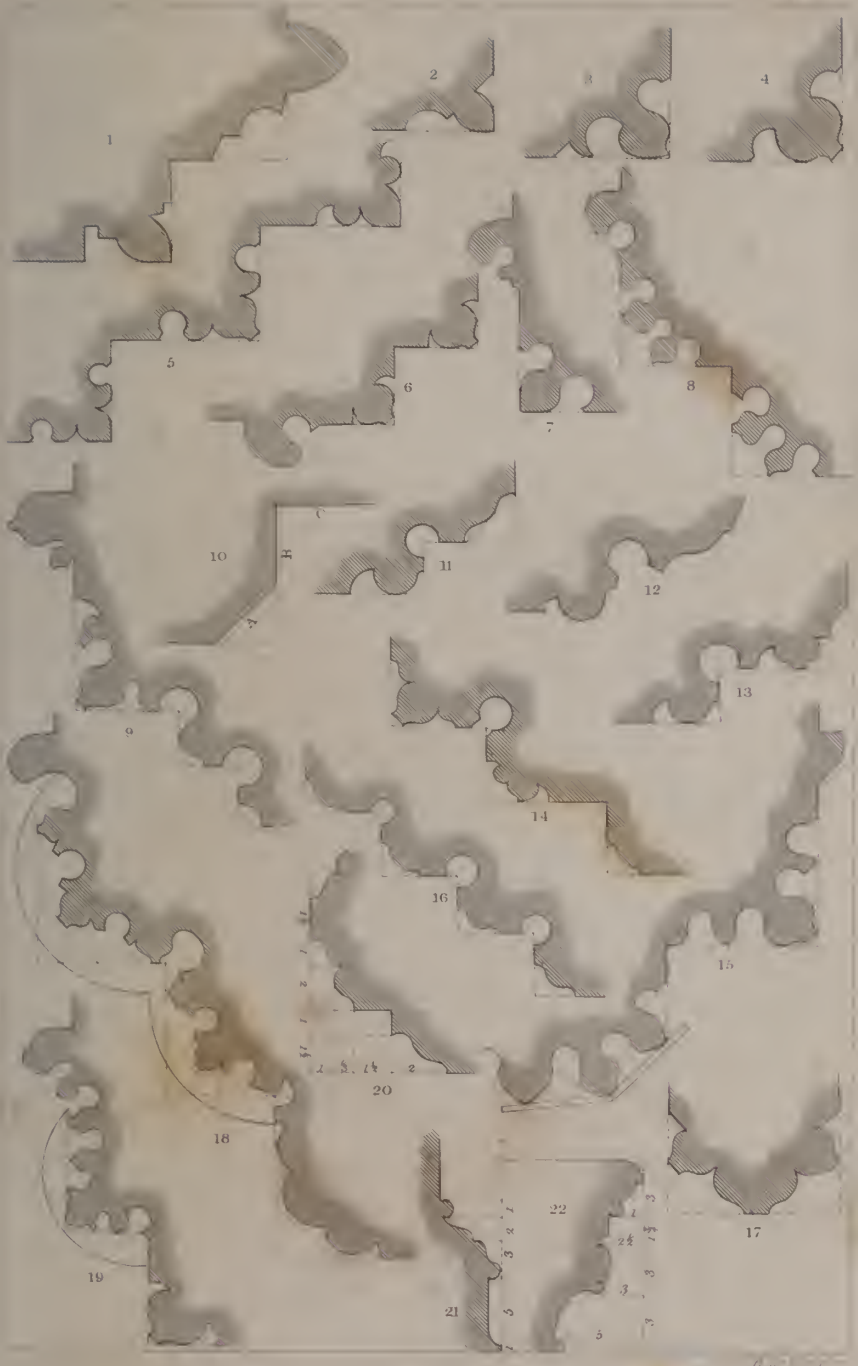
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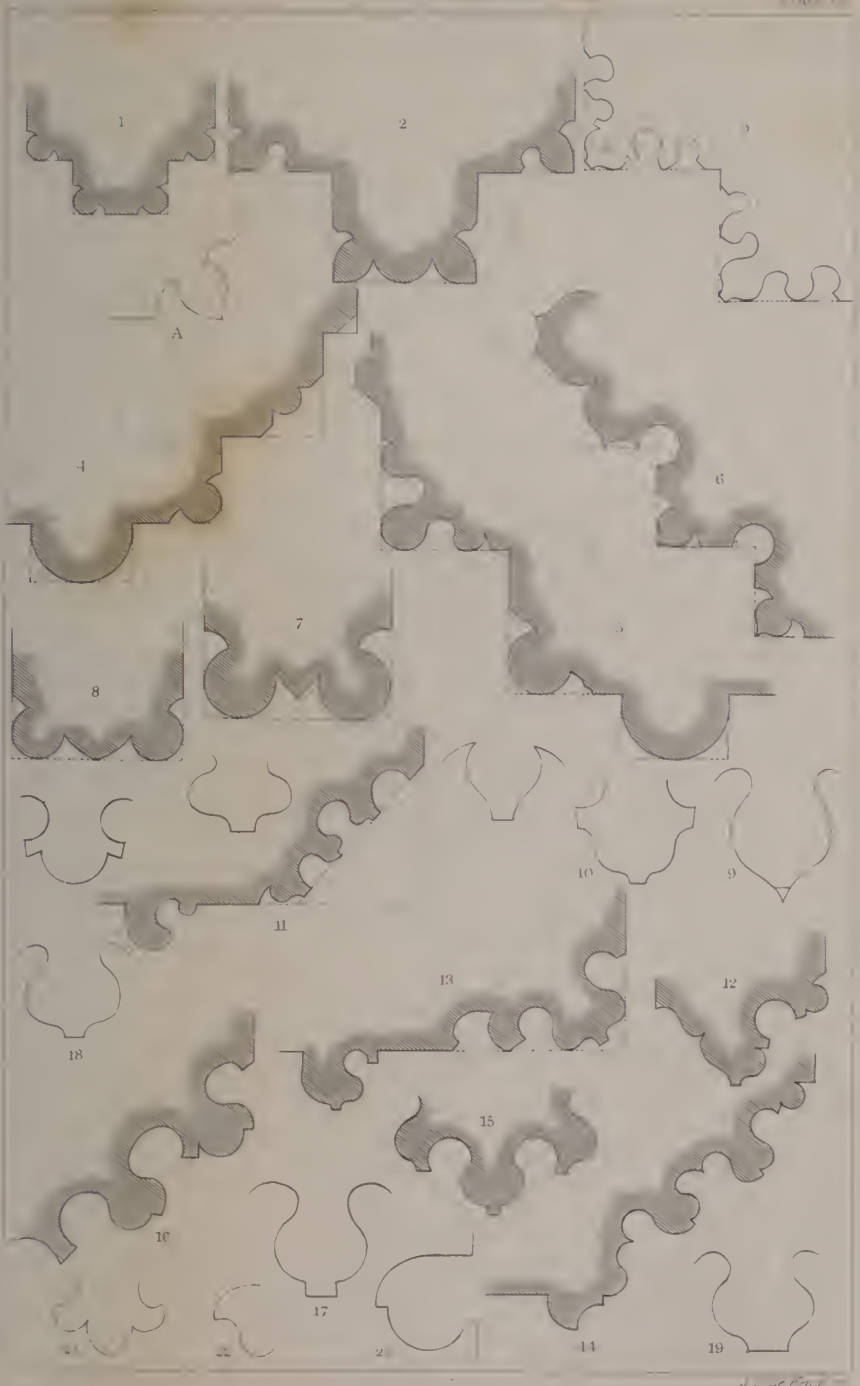
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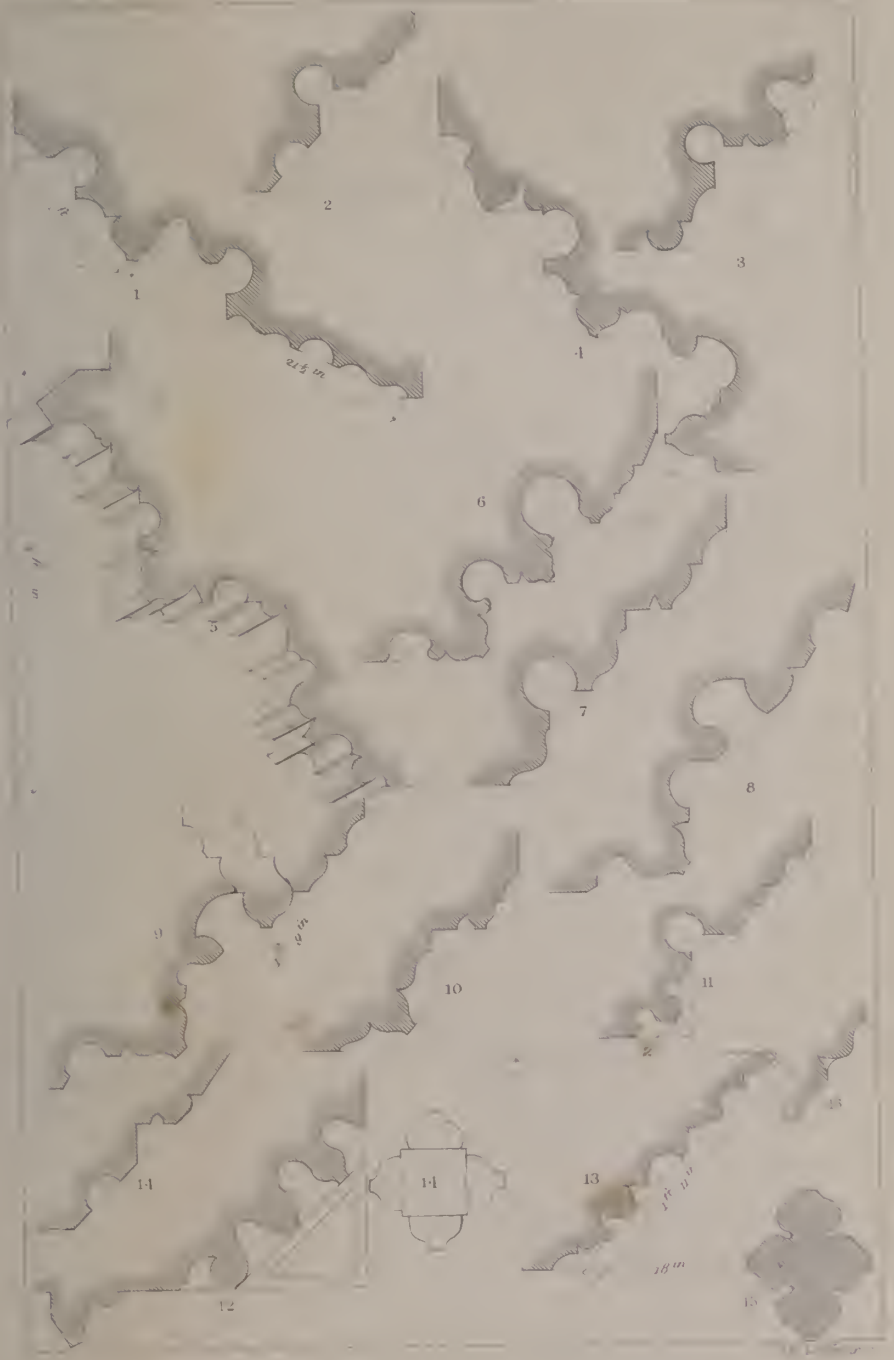
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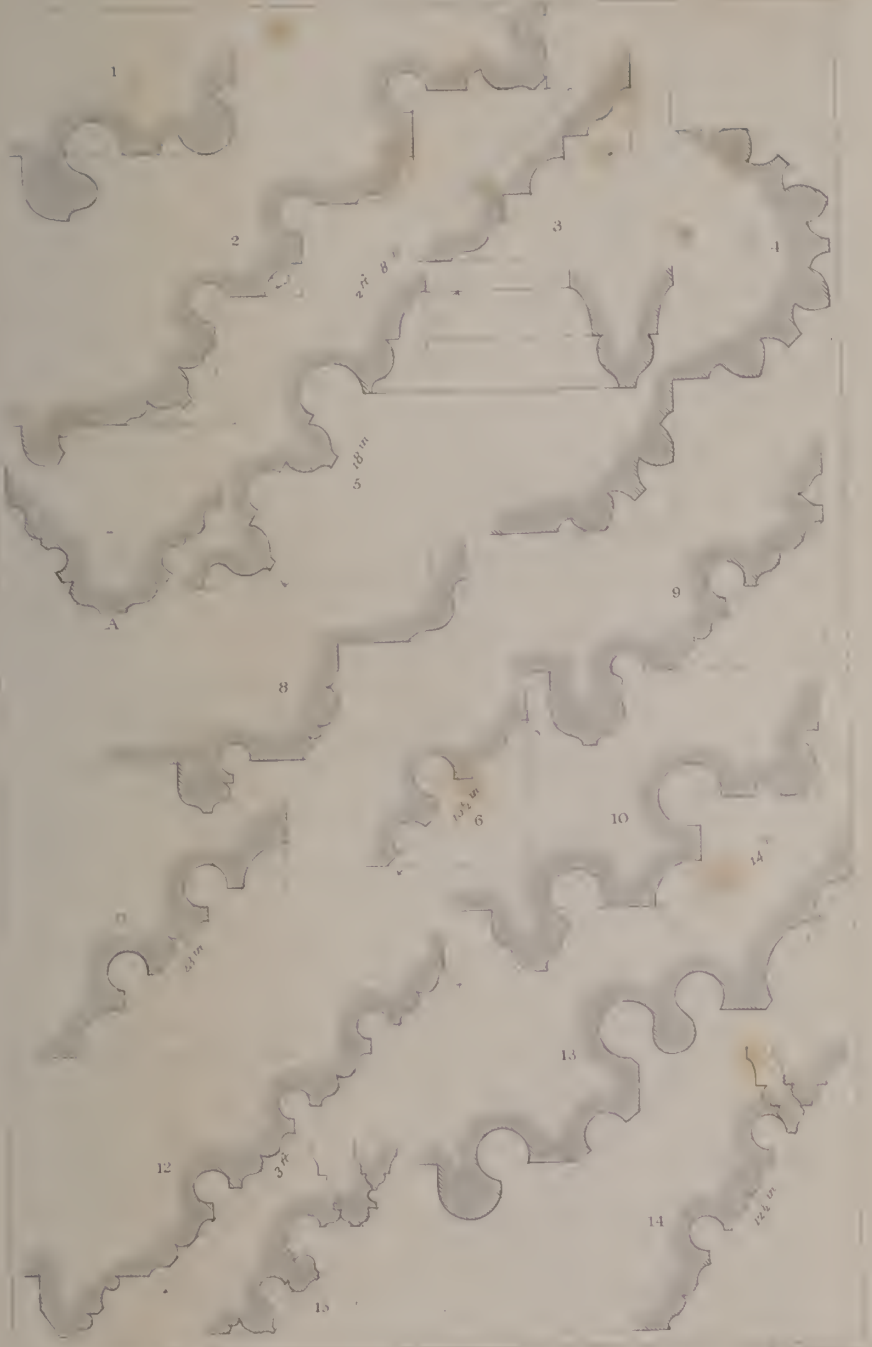
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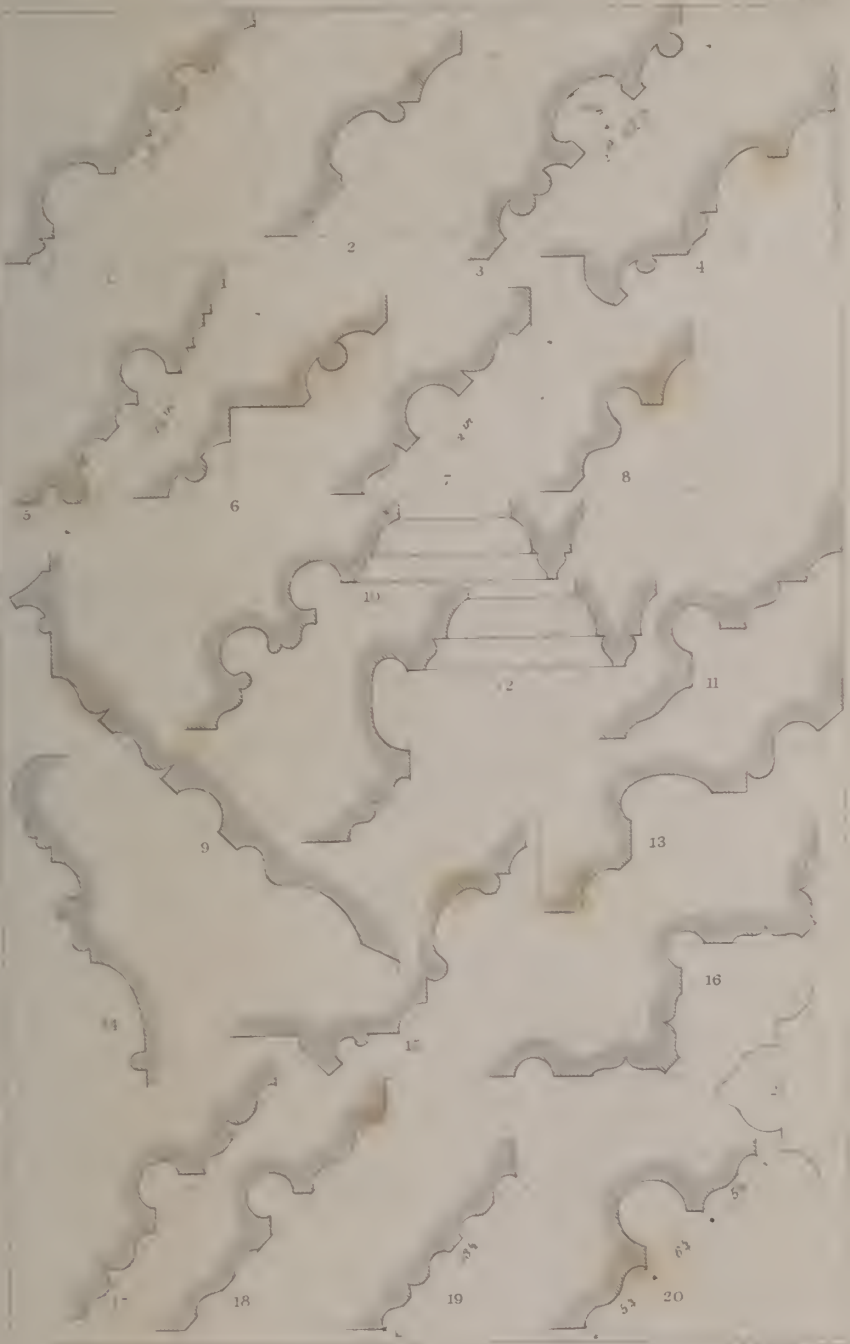
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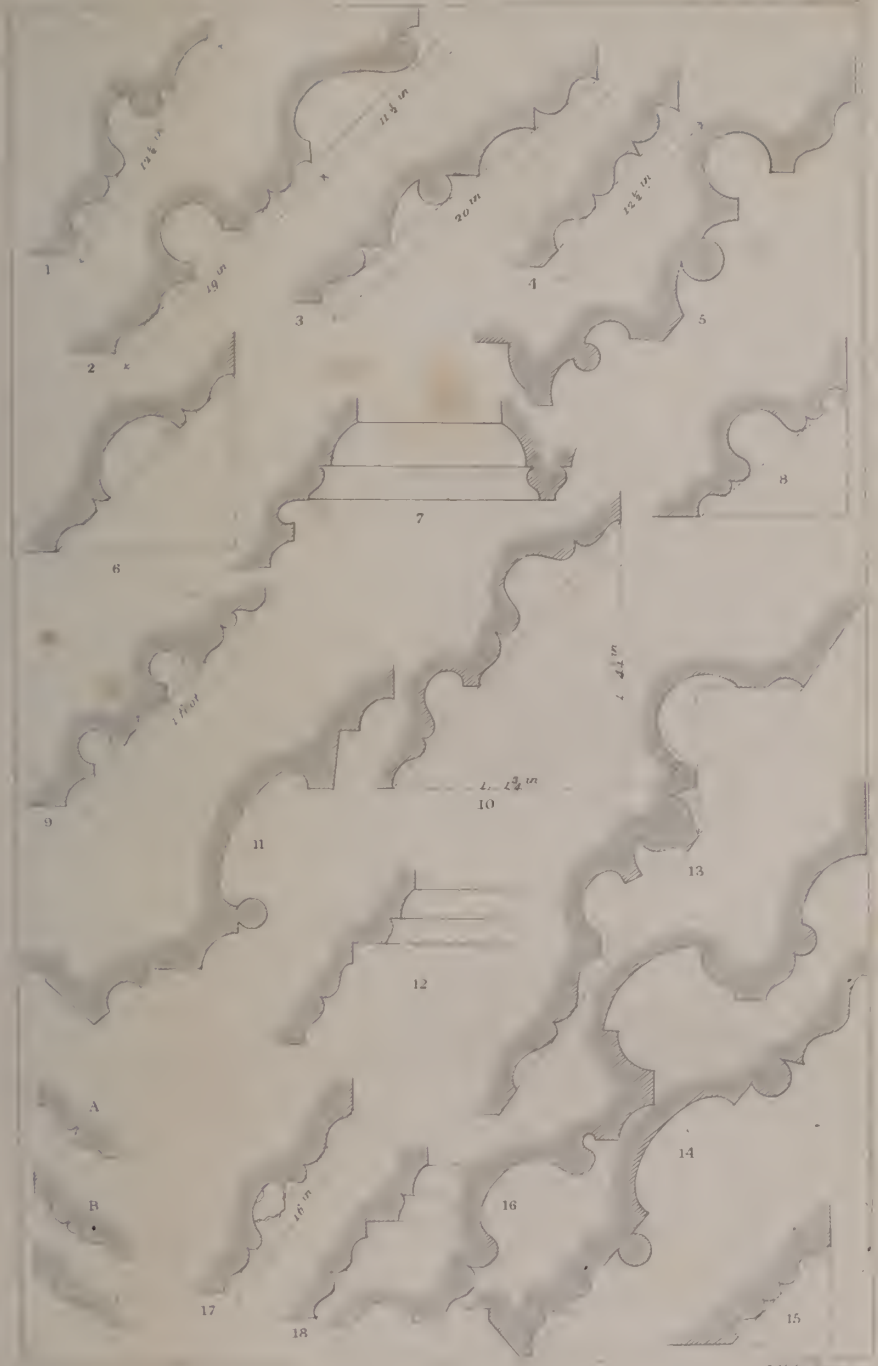

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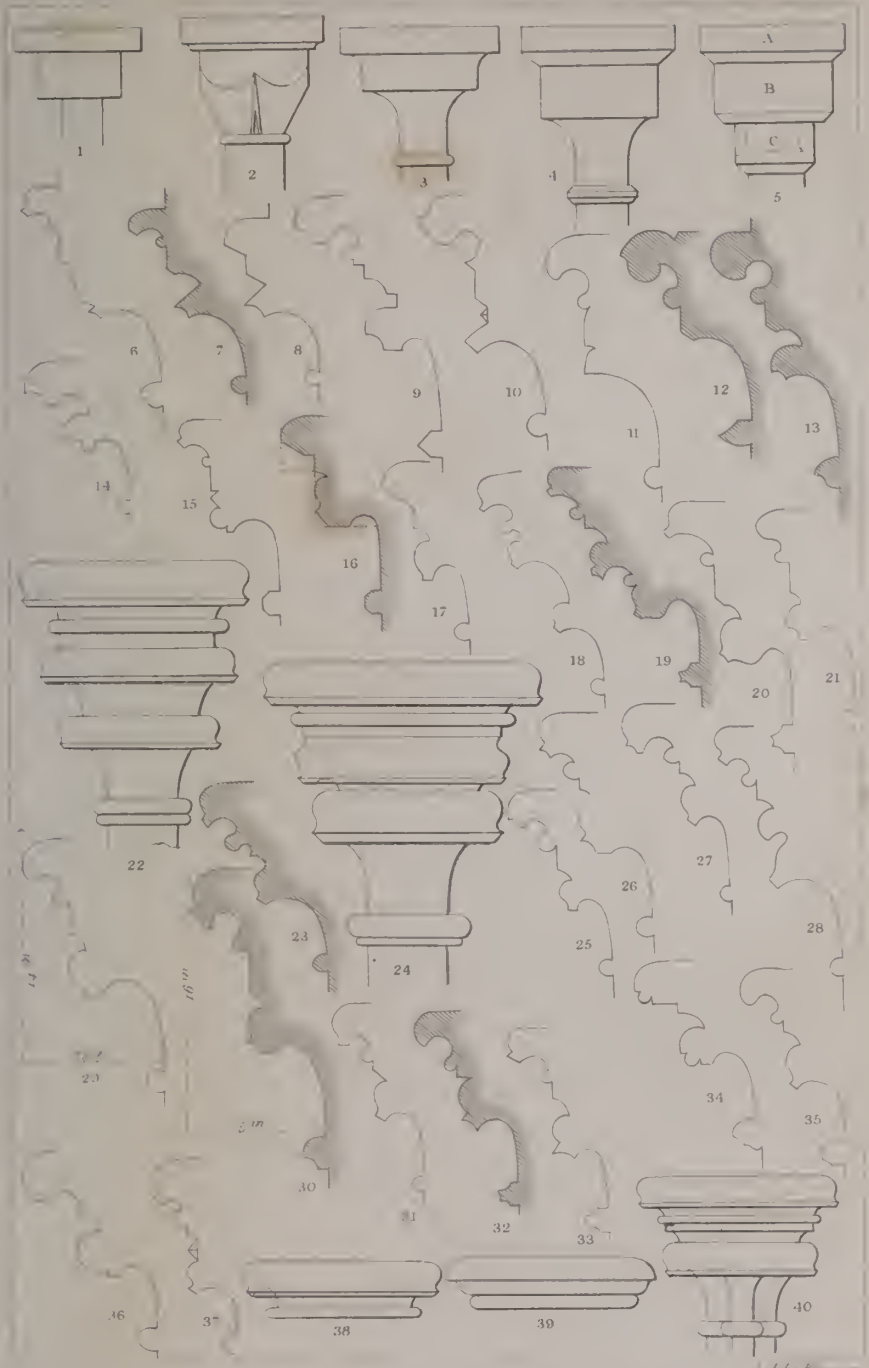
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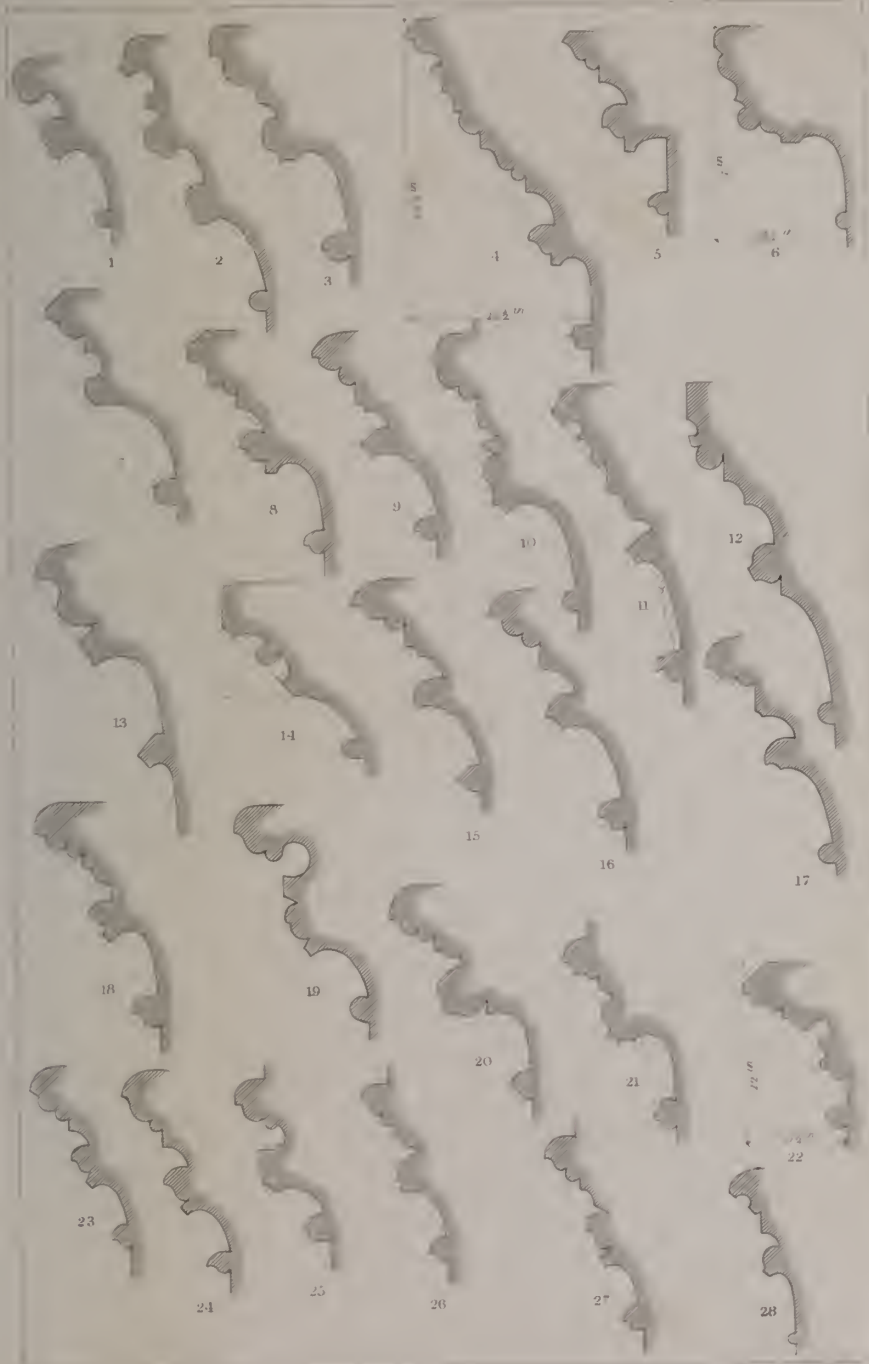
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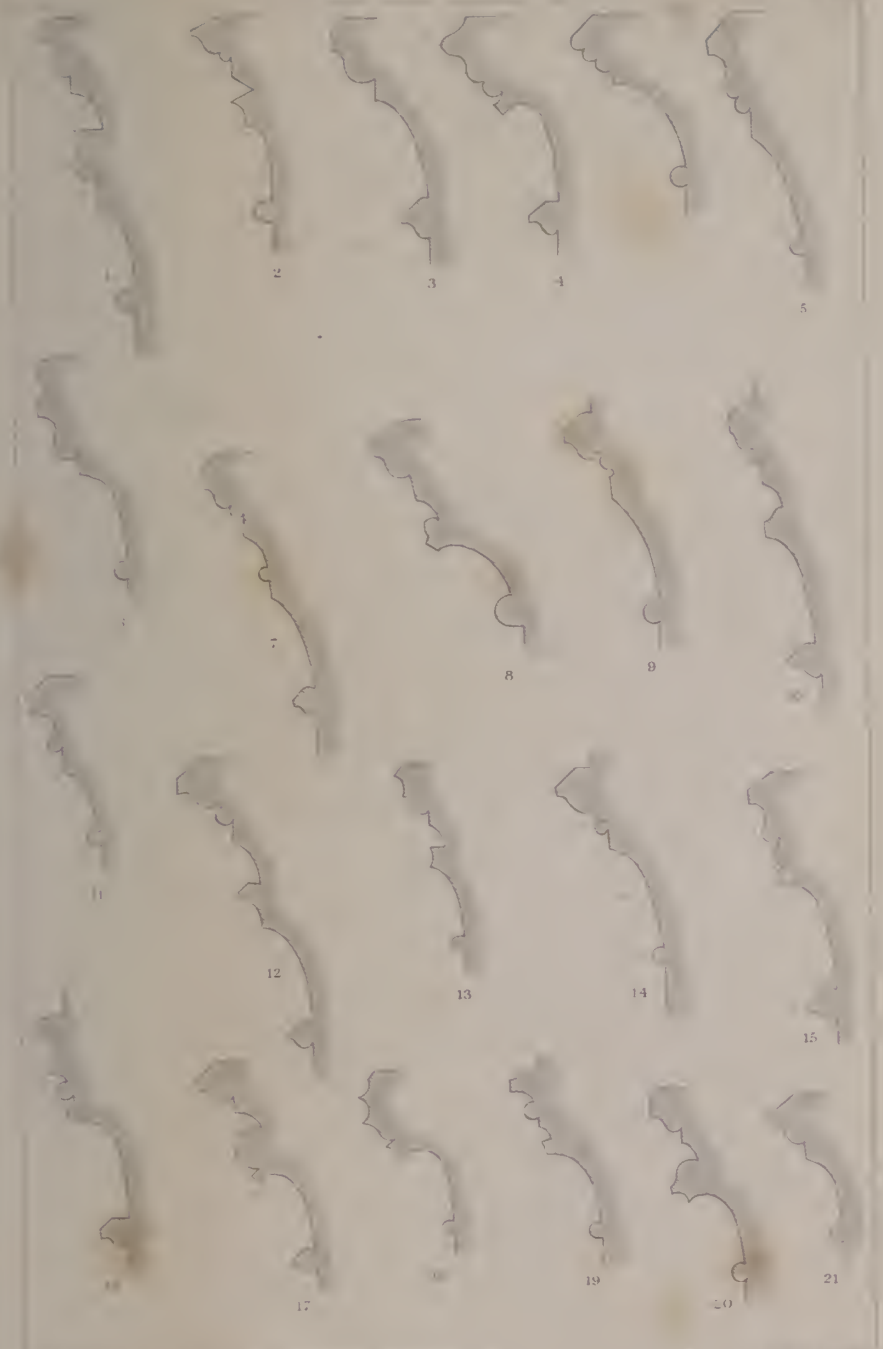
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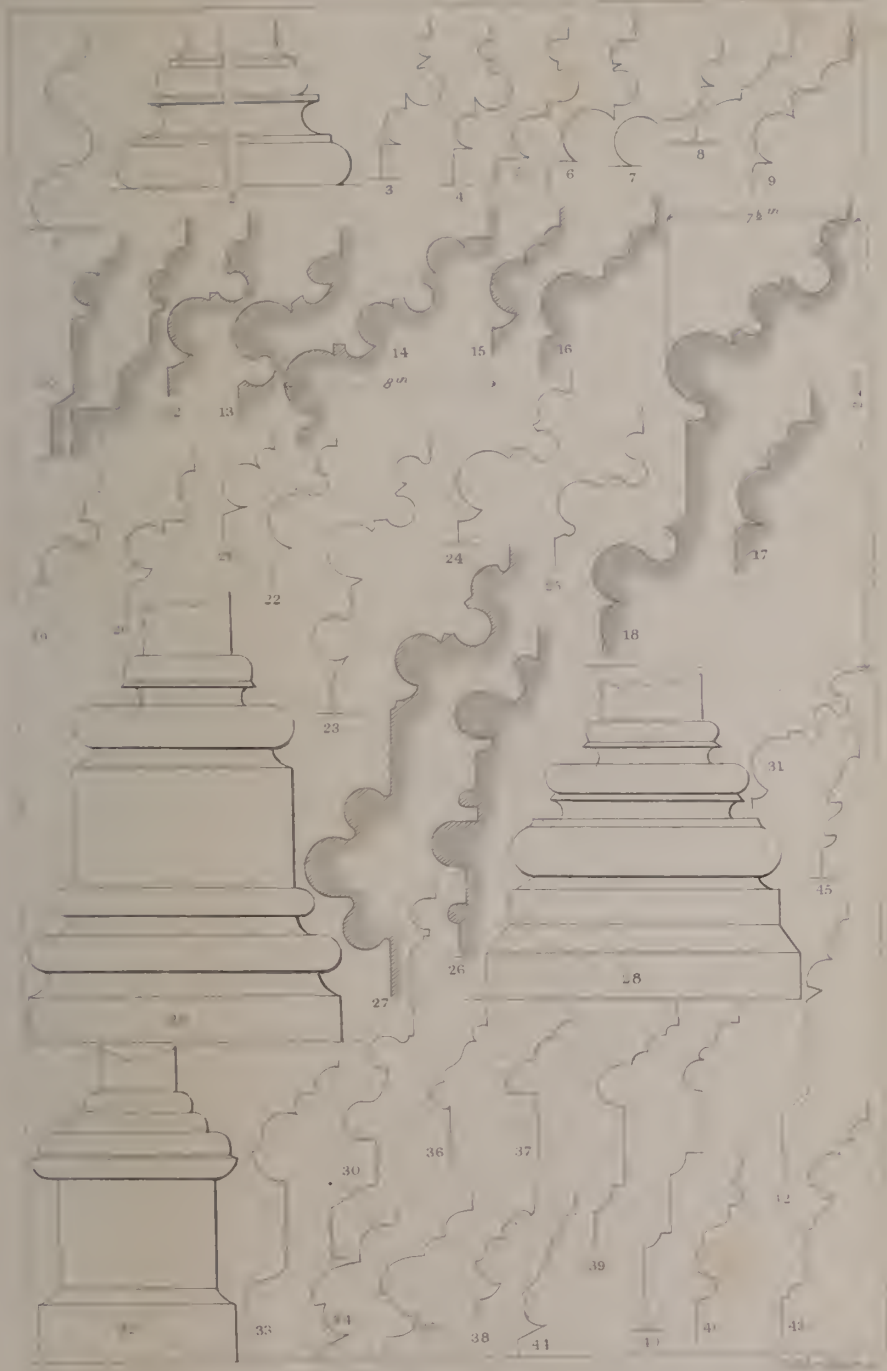
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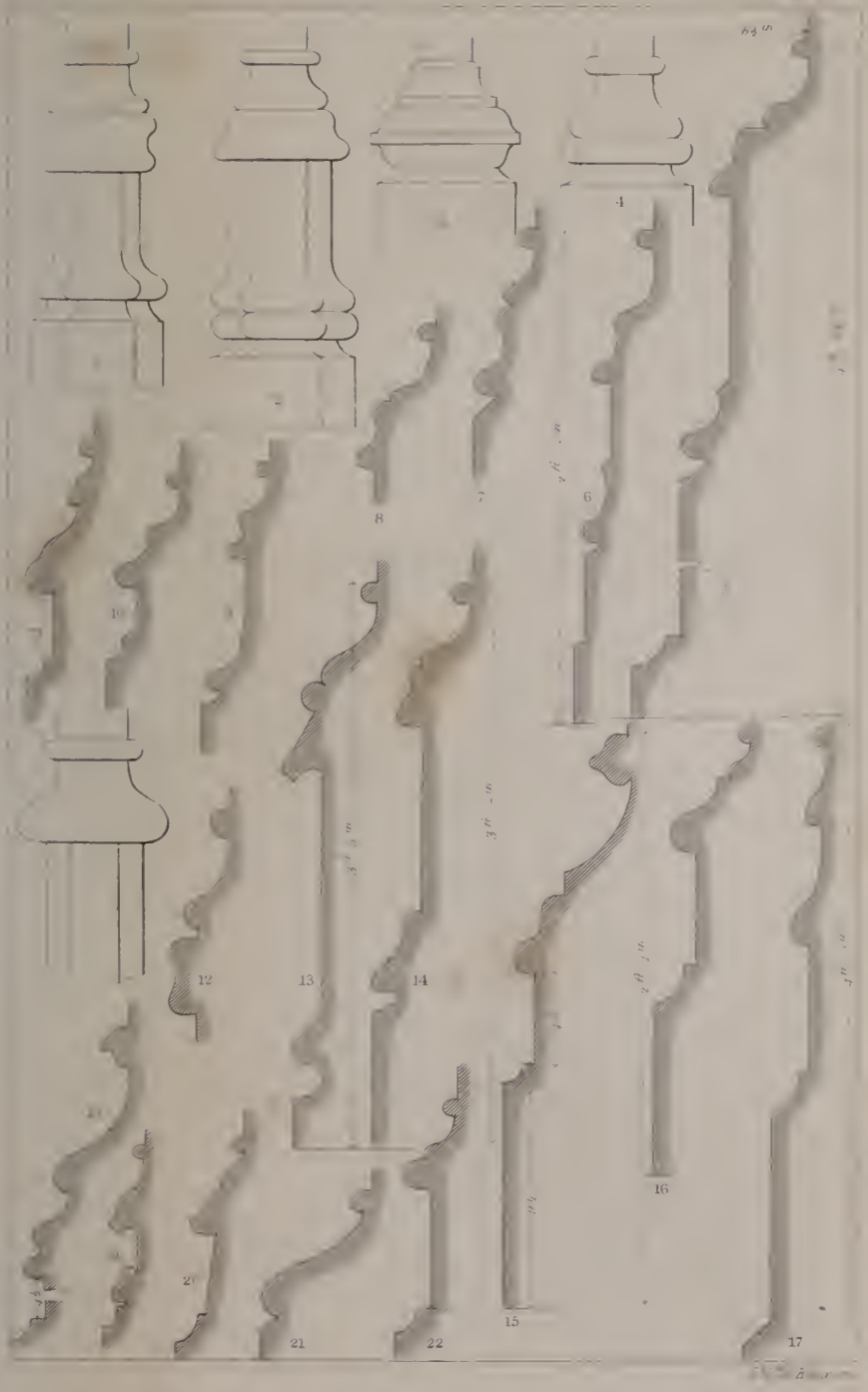
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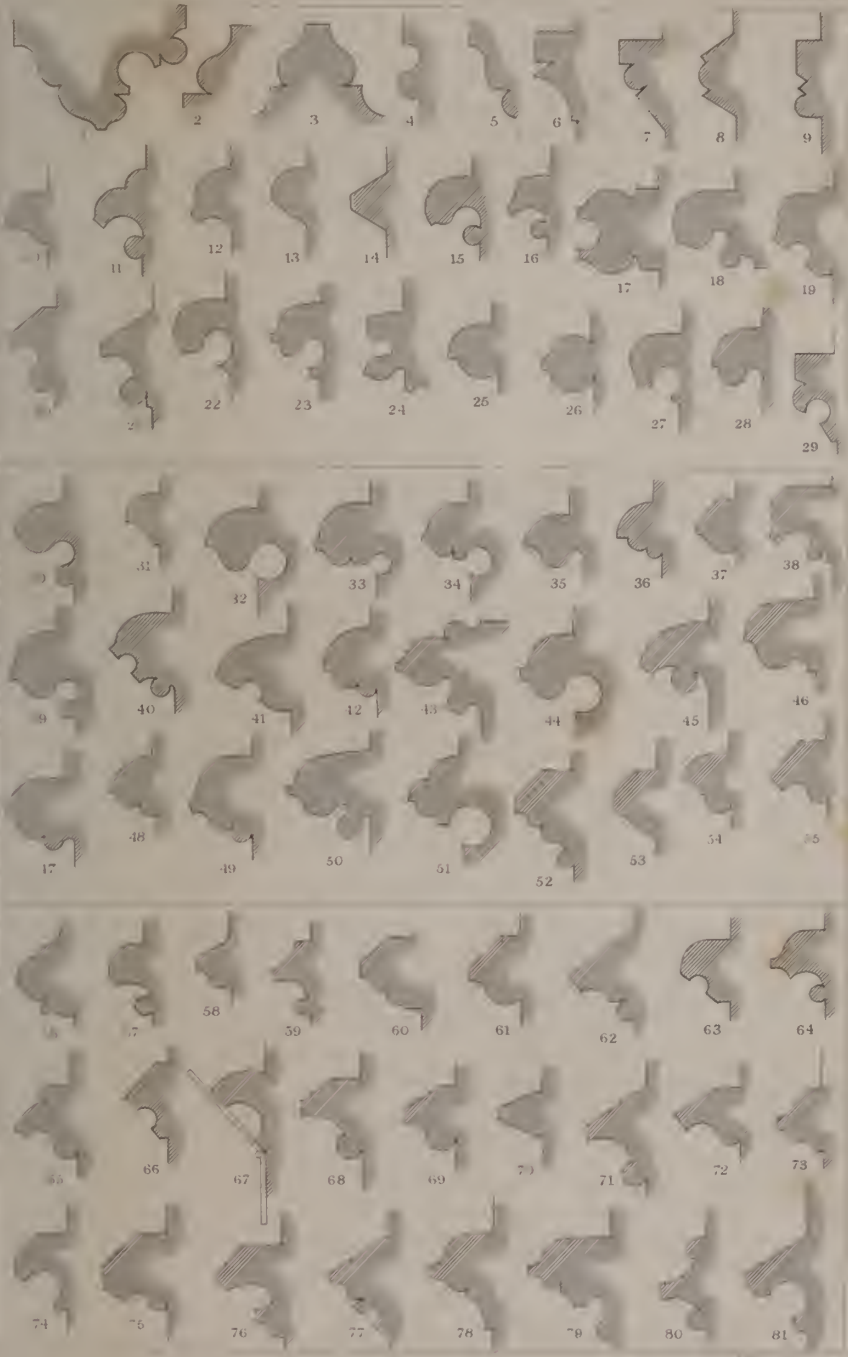
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